



# REMEDIAL ACTION PERFORMANCE REPORT FOR 2023

OREGON TOOL – INTERNATIONAL WAY FACILITY  
4909 SE INTERNATIONAL WAY, MILWAUKIE, OREGON  
WSP PROJECT NO. 461M114814

Prepared for:

**OREGON TOOL, INC.**

PO Box 22127, Portland, Oregon 97269-2127

**SEPTEMBER 2024**



## REMEDIAL ACTION PROGRESS REPORT FOR 2023

Oregon Tool - International Way Facility

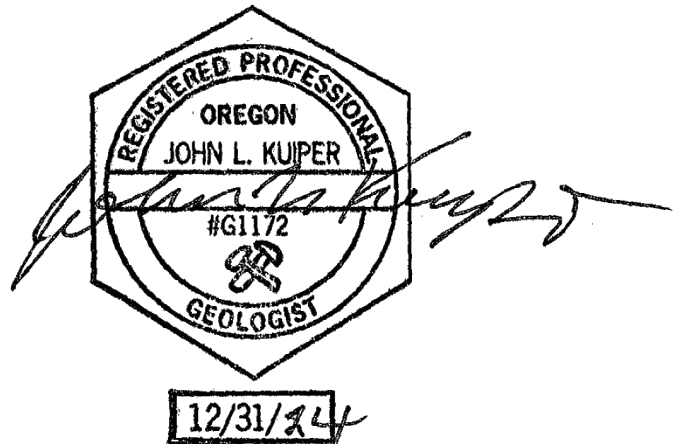
4909 SE International Way, Milwaukie, Oregon

AUGUST 2024

The material and data prepared in the report were prepared under the supervision and direction of the undersigned.

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# 1 INTRODUCTION

This report, submitted by WSP USA Environment & Infrastructure Inc. (WSP) on behalf of Oregon Tool, Inc., presents a remedial action progress evaluation for Oregon Tool's International Way blade manufacturing facility located at 4909 SE International Way in Milwaukie, Oregon (Site). Oregon Tool's former name was Blount (name changed on June 2, 2021) and the Site has in the past been referred to as "Oregon Cutting Systems". Investigation and remediation of a chlorinated solvent plume have been ongoing since the 1990's. A Site location map is presented as Figure 1. The facility layout is shown in Figure 2.

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## 1.1 PURPOSE

This report evaluates the performance of the groundwater cleanup remedy and its effectiveness in meeting performance goals. The remedy addresses the chlorinated volatile organic compounds that are the constituents of concern (COCs) found in Site groundwater. Various remedial actions were implemented to address the COCs; these include groundwater extraction, soil vapor extraction (SVE), in situ chemical oxidation (ISCO), and enhanced reductive dechlorination (ERD). Monitoring and remediation well locations are shown in Figure 2.

This report is submitted consistent with the terms of the Stipulation and Consent Agreement for a Facility Investigation (DEQ, 1989) and a Voluntary Cleanup Agreement (DEQ, 1995).

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## 1.2 BACKGROUND

Site groundwater is impacted with trichloroethene (TCE) and the related chlorinated ethenes cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC), both of which are derived from natural degradation of TCE. The COCs are present in shallow groundwater occurring within native silt and engineered fill that overlie the Troutdale Formation (course-grained alluvium). A deeper/regional aquifer is present within the Troutdale Formation. The groundwater contaminant plume is located beneath the east-central portion of the main facility building (Figure 2). The facility building is approximately 300,000 square feet in size and has a thick concrete floor which serves as a barrier to any vapor migration.

Since 1988, Oregon Tool (Blount) has operated recovery wells to hydraulically contain the TCE-impacted shallow groundwater. The TCE-impacted groundwater is removed by a pneumatic pump in RW 1. The recovered groundwater is treated on-site in a diffusion aeration tank, from which the treated water is discharged to the site's sanitary sewer system.

As described in the Remedial Investigation report (AMEC, 2006), in late 2006 Oregon Tool installed the SVE system to intercept potential VOC vapors from groundwater near recovery well RW-1, where concentrations of TCE in shallow groundwater exceeded Oregon Department of Environmental Quality (DEQ) Risk Based Concentrations (RBCs) for occupational vapor intrusion and excavation workers. Vapor from both the pumping aeration tank and the SVE system is ducted to a stack on the roof of the site's factory building. Construction details for the SVE system were provided in the "Semiannual Groundwater Monitoring - Second Half of 2007" report (AMEC, 2008).

Soil gas testing in 2013 indicated that a localized residual source of TCE was present in soil near the water table in the immediate vicinity of well MW-16 (AMEC 2014). Groundwater containing the highest TCE concentrations was treated with ISCO twice, first on July 8, 2016, and then again on July 16, 2017. COC concentration trends were monitored from 2017 to 2023. By early 2023 the only remaining area of significant TCE impact (up to 313 ug/L) was in the vicinity of recovery well RW-1 and monitoring wells MW-16, MW-17, MW-18, and MW-19 (an area of about 35 feet in diameter). TCE concentrations in the surrounding wells (RW-2, RW-3, C-1, P-8, and MW-1) ranged from non-detect (ND) to a few ug/L. ERD was implemented a final time at MW-16 in late-April 2023. The well locations are shown on Figure 2.

Semiannual sampling, including measuring groundwater levels, is performed to monitor the hydraulic containment, the declining TCE and COC concentrations within the area of higher impacts that have now been successfully treated, and the stability of low to nondetectable TCE concentrations outside of the residual plume area.

## 1.3 WORK COMPLETED DURING 2023

Operations work completed in 2023 included:

- Continued operation of extraction well RW-1 for COC mass removal and hydraulic control of the shallow plume, including routine treatment system maintenance.
  - The RW-1 groundwater extraction well operated and maintained approximately 8 feet of water table drawdown as shown on Table 1 and in Figures 3 and 4.
- Continued operation of the SVE system for COC mass removal, including routine system maintenance.

Monitoring work completed in 2023 included:

- Quarterly sampling and analysis of treatment system effluent.
  - Volatile organic compounds were not detected in the effluent samples.
- Groundwater monitoring at one or more wells in March, July, October, and December 2023.
  - Purge water from sampling activities was treated through the on-site recovered water treatment system.

The remedy work completed in 2023 consisted of:

- Injection of ERD amendment into well MW-16 on April 15, 22, and 28, 2023.
  - The amendment consisted of batches of 3 gallons of Wilclear®, a readily soluble food grade 60% sodium or potassium lactate solution (from JRW Bioremediation L.L.C.) mixed with 24 gallons of potable water.
  - A total of 250 gallons of this mixture was injected.

## 2 GROUNDWATER REMEDY PERFORMANCE RESULTS

Remedy performance for 2023 is discussed below.

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### 2.1 GROUNDWATER ELEVATIONS, FLOW

Groundwater elevations for 2023 are summarized in Table 1 and are shown in Figure 3 and Figure 4 for March 24, 2023, and October 17, 2023, respectively. The pattern of the groundwater elevations shown in Figure 3 and Figure 4 indicates a water table drawdown of approximately 8 feet at pumping well RW-1. The water table measurements were made at a limited number of wells in the vicinity of RW-1. Except for the drawdown at RW-1, the water table is roughly flat (Figure 3 and Figure 4).

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### 2.2 COC CONCENTRATIONS

Groundwater quality monitoring in the residual plume area (February 2018 through December 2023) is summarized in Table 2, and the TCE results from the 2023 sampling events are shown on Figure 5. As shown in Table 2, the 1,1,2,2-Tetrachloroethene (PCE), TCE, cis-1,2-DCE, and VC concentration in groundwater dropped dramatically at most wells over the course of 2023. The drop in COC concentrations followed the implementation of ERD at well MW-16. As shown on Table 2, the TCE concentration in groundwater at recovery well RW-1 (25.5 ug/L) was the only COC concentration exceeding a DEQ RBC in the latter part of 2023.

A historical summary of COC concentrations in all wells is presented in Table 3.

### 3 CONCLUSIONS AND RECOMMENDATIONS

Groundwater contaminant concentrations at the Site have dropped to levels that are protective of human health and the environment. While there remains a very small area of groundwater impact (TCE levels slightly exceeding the most stringent RBC [chronic vapor intrusion pathway]), the presence of the concrete floor barrier coupled with the large size of the building make it extremely unlikely that any significant accumulation of vapors could occur in indoor air. The residual TCE concentrations in groundwater are also anticipated to continue to decline over time.

Based on the remedial success, and the minimal concentrations of TCE currently observed in groundwater, we make the following recommendations:

- Turn off the groundwater extraction and SVE systems to allow for monitoring and evaluation of potential contaminant rebound. The rebound-monitoring period would last for six months.
- Rebound monitoring would consist of sampling the wells in the vicinity of the residual plume (RW-1, MW-16, MW-17, MW-18, and MW-19) on a quarterly basis for six months (two events total) to confirm that there is no significant rebound in COC concentrations.
- At the end of the six-month period a memo would be submitted to DEQ presenting the analytical results and recommendations for next steps. The expectation is that if no significant rebound occurs, then the next steps would be:
  - initiation of four consecutive quarters of final compliance monitoring (compliance wells to be selected in consultation with DEQ)
  - initiate the Site closure process and request a No Further Action (NFA) finding (provided groundwater data remains consistent - i.e., overall steady and/or declining trends in COCs).

We hereby request DEQ concurrence on the above recommendations and will implement them upon receipt of said concurrence.

## 4 REFERENCES

- AMEC Earth & Environmental, Inc. (AMEC). 2006. Remedial Investigation, Oregon Cutting Systems, 4909 SE International Way, Milwaukie, Oregon. October.
- AMEC. 2008. Semiannual Groundwater Monitoring - Second Half of 2007, Blount, Inc., 4909 SE International Way, Milwaukie, Oregon. March 31.
- AMEC. 2014. 2013 Groundwater Monitoring, Blount, Inc., 4909 SE International Way, Milwaukie, Oregon. January 24.
- Oregon Department of Environmental Quality (DEQ), 1989. Stipulation and Consent Agreement for a Facility Investigation, Clackamas County, No. HW-NWR-89-57. December 6.
- DEQ. 1995. Voluntary Cleanup Agreement. Request letter from DEQ to Blount, Inc., dated May 4, 1995, and executed by Noel Hingley of Blount, Inc. on May 12, 1995.

## 5 LIMITATIONS

This report was prepared exclusively for Oregon Tool by WSP USA Environment & Infrastructure Inc. (WSP). The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in WSP services and based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This Remedial Action Performance Report is intended to be used by Oregon Tool, for only the Oregon Tool International Way Facility in Milwaukie, Oregon, subject to the terms and conditions of its contract with WSP. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

# TABLES

**Table 1**  
**Groundwater Elevations**  
**Oregon Tool - International Way Facility, Milwaukie, Oregon**

| <b>Location</b>                | <b>Date</b> | <b>Reference<br/>Elevation<br/>(feet MSL)</b> | <b>Depth to Water<br/>(feet)</b> | <b>Groundwater<br/>Elevation<br/>(feet MSL)</b> |
|--------------------------------|-------------|-----------------------------------------------|----------------------------------|-------------------------------------------------|
| <i>Shallow Monitoring Well</i> |             |                                               |                                  |                                                 |
| MW-16                          | 3/24/2023   | 85.62                                         | 4.65                             | 80.97                                           |
|                                | 10/17/2023  | 85.62                                         | 5.38                             | 80.24                                           |
| MW-17                          | 3/24/2023   | 85.62                                         | 4.79                             | 80.83                                           |
|                                | 10/17/2023  | 85.62                                         | 4.86                             | 80.76                                           |
| MW-18                          | 3/24/2023   | 85.56                                         | 4.72                             | 80.84                                           |
|                                | 10/17/2023  | 85.56                                         | 5.01                             | 80.55                                           |
| MW-19                          | 3/24/2023   | 85.62                                         | 4.8                              | 80.82                                           |
|                                | 10/17/2023  | 85.62                                         | 4.9                              | 80.72                                           |
| <i>Shallow Recovery Wells</i>  |             |                                               |                                  |                                                 |
| RW-1                           | 3/24/2023   | 84.39                                         | 12.64                            | 71.75                                           |
|                                | 10/17/2023  | 84.39                                         | 12.35                            | 72.04                                           |
| RW-4                           | 3/24/2023   | 84.24                                         | 3.63                             | 80.61                                           |
| Z-1                            | 3/24/2023   | 85.1                                          | 5.37                             | 79.73                                           |

**Table 2**  
**TCE and Other VOC Concentration Data in Groundwater**  
**Oregon Tool - International Way Facility, Milwaukie, Oregon**

| Well                                                      | Date                                               | VOCs (ug/L)     |                |                         |                           |                    |               |                    | TOC (mg/L) |
|-----------------------------------------------------------|----------------------------------------------------|-----------------|----------------|-------------------------|---------------------------|--------------------|---------------|--------------------|------------|
|                                                           |                                                    | PCE<br>127-18-4 | TCE<br>79-01-6 | cis-1,2-DCE<br>156-59-2 | trans-1,2-DCE<br>156-60-5 | 1,1-DCE<br>75-35-4 | VC<br>75-01-4 | 1,1-DCA<br>75-34-3 |            |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                                                    | >S              | 20,000         | >S                      | >S                        | 2,400,000          | 5,900         | 68,000             | --         |
| Groundwater in an Excavation <sup>1</sup>                 |                                                    | 5,600           | 430            | 18,000                  | 180,000                   | 44,000             | 960           | 10,000             | --         |
| Commercial Chronic Vapor Intrusion RBCw <sup>2</sup>      |                                                    | 130             | 13             | 1,800                   | 750                       | 1,300              | 3.3           | 55                 | --         |
| Commercial Acute Vapor Intrusion RBCw <sup>2</sup>        |                                                    | 330             | 27             | --                      | 10,000                    | 890                | 4,600         | --                 | --         |
| MW-16                                                     | 2/15/2018                                          | 8 U             | 978            | 220                     | 50.6                      | 8 U                | 15.1          | 8 U                | --         |
|                                                           | 8/1/2018                                           | 4 U             | 835            | 392                     | 53                        | 4 U                | 31.6          | 4 U                | --         |
|                                                           | 9/20/2018                                          | 2.25            | 792            | 40.7                    | 46                        | 2                  | 34.3          | 2 U                | --         |
|                                                           | 10/31/2018                                         | 4 U             | 668            | 417                     | 47.3                      | 4 U                | 33.6          | 4 U                | --         |
|                                                           | 11/29/2018                                         | 4 U             | 359            | 351                     | 31                        | 4 U                | 28.3          | 4 U                | --         |
|                                                           | 12/17/2018                                         | 4 U             | 538            | 288                     | 26.2                      | 4 U                | 4 U           | 4 U                | --         |
|                                                           | 2/1/2019                                           | 4 U             | 343            | 190                     | 16.8                      | 4 U                | 4 U           | 4 U                | --         |
|                                                           | 1/28/2020                                          | 5 U             | 148            | 127                     | 8.82                      | 2 U                | 2 U           | 2 U                | --         |
|                                                           | 10/21/2020                                         | 2 U             | 451            | 380                     | 30.3                      | 2 U                | 2.5           | 2 U                | --         |
|                                                           | 10/25/2021                                         | 0.4 U           | 29.1           | 143                     | 11                        | 0.4 U              | 29.3          | 0.633              | --         |
|                                                           | 3/24/2023                                          | 0.4 U           | 107            | 158                     | 12.6                      | 0.65               | 12.2          | 0.5                | 2.2        |
|                                                           | ERD injection mid to late April 2023 at well MW-16 |                 |                |                         |                           |                    |               |                    |            |
|                                                           | 7/17/2023                                          | 25.0 U          | 25.0 U         | 501                     | 32                        | 25.0 U             | 77            | 25.0 U             | 8520       |
|                                                           | 10/17/2023                                         | 4.00 U          | 4.00 U         | 4.00 U                  | 6.3                       | 4.00 U             | 2.00 U        | 4.00 U             | 989        |
| MW-17                                                     | 2/15/2018                                          | 0.4 U           | 1.82           | 0.4 U                   | 0.4 U                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 11/29/2018                                         | 0.4 U           | 1.52           | 2.84                    | 0.4 U                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/21/2020                                         | 0.4 U           | 2.49           | 11.6                    | 1.2                       | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/25/2021                                         | 0.4 U           | 2.33           | 10.8                    | 1.1                       | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 3/24/2023                                          | 0.400 U         | 2.43           | 2.78                    | 0.400 U                   | 0.400 U            | 0.400 U       | 0.400 U            | 1.51       |
|                                                           | ERD injection mid to late April 2023 at well MW-16 |                 |                |                         |                           |                    |               |                    |            |
|                                                           | 7/17/2023                                          | 25.0 U          | 25.0 U         | 15.5                    | 25.0 U                    | 25.0 U             | 25.0 U        | 25.0 U             | 4790       |
|                                                           | 10/17/2023                                         | 0.400 U         | 14             | 146                     | 7.03                      | 0.45               | 1.81          | 0.400 U            | 1.28       |
| MW-18                                                     | 2/15/2018                                          | 0.4 U           | 102            | 101                     | 5.41                      | 0.4 U              | 4.17          | 0.4 U              | --         |
|                                                           | 11/29/2018                                         | 0.4 U           | 5.46           | 13.5                    | 0.594                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/21/2020                                         | 0.4 U           | 15.2           | 83.7                    | 4.64                      | 0.4 U              | 2.64          | 0.4 U              | --         |
|                                                           | 10/25/2021                                         | 0.4 U           | 21.5           | 81.6                    | 4.47                      | 0.4 U              | 1.57          | 0.4 U              | --         |
|                                                           | 3/24/2023                                          | 0.400 U         | 313            | 575                     | 42                        | 1.19               | 72.8          | 0.75               | 1.93       |
|                                                           | ERD injection mid to late April 2023 at well MW-16 |                 |                |                         |                           |                    |               |                    |            |
|                                                           | 8/9/2023                                           | 0.400 U         | 21.8           | 50.4                    | 3.43                      | 0.400 U            | 0.21          | 0.400 U            | 1.59       |
|                                                           | 10/17/2023                                         | 0.800 U         | 0.800 U        | 6.4                     | 0.800 U                   | 0.800 U            | 1.64          | 0.800 U            | 115        |
| MW-19                                                     | 2/15/2018                                          | 2.06            | 18.9           | 5.07                    | 0.762                     | 0.4 U              | 0.858         | 0.4 U              | --         |
|                                                           | 11/29/2018                                         | 2.03            | 56.6           | 9.74                    | 0.681                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/21/2020                                         | 2.1             | 84.7           | 22.5                    | 0.85                      | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/25/2021                                         | 0.4 U           | 17.2           | 12.7                    | 0.474                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 3/24/2023                                          | 2.22            | 131            | 24.5                    | 1.49                      | 0.400 U            | 0.69          | 0.400 U            | 1.4        |
|                                                           | ERD injection mid to late April 2023 at well MW-16 |                 |                |                         |                           |                    |               |                    |            |
|                                                           | 10/17/2023                                         | 0.400 U         | 0.400 U        | 3.20 U                  | 0.400 U                   | 0.400 U            | 0.200 U       | 0.400 U            | --         |
|                                                           | 12/7/2023                                          | 0.4 U           | 4.12           | 3.31                    | 0.4 U                     | 0.4 U              | 0.2 U         | 0.4 U              | --         |
| RW-1                                                      | 2/15/2018                                          | 0.62            | 10.7           | 62.9                    | 1.46                      | 0.4 U              | 0.858         | 0.4 U              | --         |
|                                                           | 11/29/2018                                         | 2.11            | 26.8           | 22.6                    | 0.673                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/21/2020                                         | 1.63            | 14.3           | 9.1                     | 0.4 U                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 10/25/2021                                         | 1.5             | 38.3           | 18.1                    | 0.4 U                     | 0.4 U              | 0.4 U         | 0.4 U              | --         |
|                                                           | 3/24/2023                                          | 1.74            | 26             | 23.6                    | 0.5                       | 0.400 U            | 0.400 U       | 0.400 U            | 1.56       |
|                                                           | ERD injection mid to late April 2023 at well MW-16 |                 |                |                         |                           |                    |               |                    |            |
|                                                           | 7/17/2023                                          | 0.81            | 29.1           | 26.4                    | 0.73                      | 0.500 U            | 0.500 U       | 0.500 U            | 1.61       |
|                                                           | 10/17/2023                                         | 1.19            | 25.5           | 17.8                    | 0.88                      | 0.400 U            | 0.25          | 0.400 U            | 1.27       |

**Table 2**  
**TCE and Other VOC Concentration Data in Groundwater**  
**Oregon Tool - International Way Facility, Milwaukie, Oregon**

**Notes:**

**Shaded Bold** = detection limit or analyte concentration exceeds at least one RBC

<sup>1</sup> = Oregon Department of Environmental Quality Risk-Based Concentrations for Individual Chemicals, August 2023.

<sup>2</sup> = Oregon Department of Environmental Quality Chronic and Acute Vapor Intrusion Risk-Based Concentrations, March 2024.  
Injection of enhanced reductive dechlorination amendment occurred on April 15, 22, and 28, 2023

**Abbreviations:**

-- = not measured

µg/L = micrograms per liter

>S = RBC exceeds the solubility limit

DCA = dichloroethane

DCE = dichloroethene

ERD = enhanced reductive dechlorination

PCE = tetrachloroethene

RBC = Oregon Department of Environmental Quality Risk-Based Concentration

TCE = trichloroethene

TOC = total organic carbon

U = analyte not detected at or above the given detection limit

VC = vinyl chloride

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| C-1                                                       | 10/20/1988 | --          | 32.0    | --          | --            | --        | --      | --      |
|                                                           | 11/17/1988 | --          | 105     | --          | --            | --        | --      | --      |
|                                                           | 1/31/1989  | --          | 13.0    | --          | --            | --        | --      | --      |
|                                                           | 2/14/1989  | --          | 8.20    | --          | --            | --        | --      | --      |
|                                                           | 2/18/1989  | --          | 52.0    | --          | --            | --        | --      | --      |
|                                                           | 2/24/1989  | --          | 35.0    | --          | --            | --        | ND      | --      |
|                                                           | 3/24/1989  | --          | 20.0    | 18.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/24/1989  | --          | 14.0    | 17.0        | ND            | ND        | ND      | ND      |
|                                                           | 5/18/1989  | --          | 18.0    | 14.0        | ND            | ND        | ND      | ND      |
|                                                           | 6/9/1989   | --          | 9.90    | 10.7        | ND            | ND        | ND      | ND      |
|                                                           | 8/17/1989  | --          | 11.0    | 17.0        | 2.00          | ND        | 10.0    | ND      |
|                                                           | 12/28/1990 | --          | 3.60    | 3.40        | ND            | ND        | 1.90    | ND      |
|                                                           | 3/12/1991  | --          | 9.40    | ND          | ND            | ND        | ND      | 2.60    |
|                                                           | 6/17/1991  | --          | 4.80    | 5.30        | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | 460     | 94.0        | 6.00          | 4.00      | 18.0    | 7.00    |
|                                                           | 12/6/1991  | --          | 120     | 120         | 3.40          | 2.00      | 5.60    | 4.40    |
|                                                           | 3/9/1992   | --          | 4.90    | 16.0        | ND            | ND        | ND      | 1.50    |
|                                                           | 6/5/1992   | --          | 4.80    | 19.2        | 3.40          | 2.00      | 5.60    | 4.60    |
|                                                           | 9/29/1992  | --          | ND      | 6.00        | ND            | ND        | ND      | ND      |
|                                                           | 6/17/1993  | --          | 0.900   | 7.00        | ND            | ND        | ND      | 4.20    |
|                                                           | 12/1/1993  | --          | 8.00    | 16.0        | 0.800         | ND        | 0.900   | ND      |
|                                                           | 3/2/1994   | --          | 12.0    | 8.70        | ND            | ND        | ND      | 3.80    |
|                                                           | 6/11/1994  | --          | 1.90    | 6.40        | ND            | ND        | 0.800   | 3.90    |
|                                                           | 9/8/1994   | --          | 4.60    | 12.0        | 0.600         | ND        | 1.30    | 5.20    |
|                                                           | 12/7/1994  | --          | 13.0    | 7.70        | ND            | ND        | ND      | 3.70    |
|                                                           | 2/27/1995  | --          | 9.40    | 5.20        | ND            | ND        | ND      | 2.40    |
|                                                           | 6/7/1995   | --          | 2.40    | 5.50        | ND            | ND        | ND      | 3.70    |
|                                                           | 9/8/1995   | --          | 3.80    | 4.80        | ND            | ND        | ND      | 1.70    |
|                                                           | 12/8/1995  | --          | 7.20    | 3.40        | ND            | ND        | ND      | 2.10    |
|                                                           | 3/6/1996   | --          | 4.30    | 3.00        | ND            | ND        | ND      | 1.60    |
|                                                           | 6/6/1996   | --          | 3.80    | 3.10        | ND            | ND        | ND      | 1.50    |
|                                                           | 9/4/1996   | --          | 2.40    | 5.60        | ND            | ND        | ND      | 1.30    |
|                                                           | 12/4/1996  | --          | 6.90    | 3.40        | ND            | ND        | ND      | 1.10    |
|                                                           | 3/5/1997   | --          | 5.90    | 3.40        | ND            | ND        | ND      | 1.60    |
|                                                           | 6/4/1997   | --          | 2.30    | 2.30        | ND            | ND        | ND      | 1.00    |
|                                                           | 9/3/1997   | --          | 1.60    | 3.90        | ND            | ND        | ND      | 0.900   |
|                                                           | 12/3/1997  | --          | 2.90    | 2.10        | ND            | ND        | ND      | 1.00    |
|                                                           | 3/10/1998  | --          | 2.60    | 1.80        | ND            | ND        | ND      | 0.800   |
|                                                           | 6/3/1998   | --          | 1.00    | 1.70        | ND            | ND        | ND      | 0.600   |
|                                                           | 1/15/1999  | --          | 1.90    | 2.00        | ND            | ND        | ND      | 0.900   |
|                                                           | 7/28/1999  | ND          | 1.10    | 2.30        | ND            | ND        | ND      | ND      |
|                                                           | 8/25/1999  | ND          | 1.10    | 5.40        | ND            | ND        | ND      | 0.700   |

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| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| C-1 (cont)                                                | 11/9/1999  | ND          | 1.40    | 6.40        | ND            | ND        | ND      | 0.600   |
|                                                           | 3/21/2000  | ND          | 1.30    | 2.20        | ND            | ND        | ND      | 0.600   |
|                                                           | 3/27/2001  | ND          | 1.40    | 1.40        | ND            | ND        | ND      | 0.600   |
|                                                           | 3/25/2002  | ND          | 1.10    | 1.20        | ND            | ND        | ND      | 0.510   |
|                                                           | 3/24/2003  | ND          | ND      | 4.40        | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004   | ND          | ND      | 8.60        | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004  | ND          | ND      | 7.40        | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005  | ND          | ND      | 7.10        | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006  | ND          | 0.530   | 6.00        | 0.550         | ND        | ND      | ND      |
|                                                           | 10/16/2006 | ND          | ND      | 1.80        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007  | ND          | ND      | 5.90        | ND            | ND        | ND      | ND      |
|                                                           | 10/30/2007 | ND          | ND      | 6.60        | ND            | ND        | ND      | ND      |
|                                                           | 7/31/2008  | ND          | ND      | 10.0        | 0.500         | ND        | ND      | ND      |
|                                                           | 3/24/2009  | 0.500 U     | 0.500 U | 6.40        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009 | 0.500 U     | 0.500 U | 1.39        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010  | 0.500 U     | 0.500 U | 5.70        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010 | 0.500 U     | 0.500 U | 6.60        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011  | 0.500 U     | 0.500 U | 7.40        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011 | 0.500 U     | 0.500 U | 0.740       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012  | 0.500 U     | 0.500 U | 4.70        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| 3/5/2013                                                  | 0.500 U    | 0.500 U     | 6.90    | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| 10/3/2013                                                 | 0.500 U    | 0.500 U     | 6.89    | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| 6/26/2014                                                 | 0.500 U    | 0.500 U     | 7.89    | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| DW-101                                                    | 3/9/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/18/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/18/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/14/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | ND      | 5.00        | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/9/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| 6/4/1997                                                  | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |
| DW-102                                                    | 3/9/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/19/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/22/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/26/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| DW-102 (cont)                                             | 6/20/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| DW-103                                                    | 3/9/1989   | --          | --      | --          | --            | --        | --      | --      |
|                                                           | 4/19/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/19/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/22/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/26/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/12/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/9/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| Effluent                                                  | 5/17/2002  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/3/2002   | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/2/2002   | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/29/2002  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/16/2002 | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/11/2003  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/16/2003 | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004   | ND          | 1.70    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 11/19/2013 | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| Influent                                                  | 3/27/2001  | 0.510       | 26.0    | 3.90        | ND            | ND        | ND      | ND      |
|                                                           | 3/25/2002  | ND          | 2.50    | 1.20        | ND            | ND        | ND      | ND      |
|                                                           | 5/13/2002  | 3.10        | 140     | 0.580       | ND            | ND        | ND      | 1.20    |
|                                                           | 5/13/2002  | 2.40        | 78.0    | ND          | ND            | ND        | ND      | 0.640   |
|                                                           | 5/13/2002  | 2.10        | 58.0    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/2002  | 0.630       | 14.0    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/23/2002  | ND          | 4.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/3/2002   | ND          | 2.20    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/17/2002  | ND          | 3.10    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/2/2002   | ND          | 2.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/15/2002  | ND          | 3.00    | 1.60        | ND            | ND        | ND      | ND      |
|                                                           | 7/29/2002  | ND          | 2.80    | 4.40        | ND            | ND        | ND      | ND      |
|                                                           | 8/12/2002  | ND          | 6.00    | 1.20        | ND            | ND        | ND      | ND      |

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| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| Influent (cont)                                           | 9/16/2002  | 0.980       | 33.0    | 7.70        | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002  | ND          | 4.50    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/14/2002 | ND          | 2.20    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 11/4/2002  | ND          | 1.10    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 11/25/2002 | ND          | 0.640   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/16/2002 | ND          | 1.20    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/11/2003  | ND          | 14.0    | 14.0        | 0.790         | ND        | 0.650   | ND      |
|                                                           | 3/3/2003   | ND          | 13.0    | 13.0        | 0.590         | ND        | ND      | ND      |
|                                                           | 3/24/2003  | ND          | 19.0    | 18.0        | 1.00          | ND        | 0.580   | ND      |
|                                                           | 4/14/2003  | ND          | 12.0    | 14.0        | 0.570         | ND        | ND      | ND      |
|                                                           | 5/5/2003   | ND          | 3.40    | 2.90        | ND            | ND        | ND      | ND      |
|                                                           | 5/28/2003  | ND          | 9.00    | 5.30        | ND            | ND        | ND      | ND      |
|                                                           | 6/17/2003  | ND          | 8.00    | 3.70        | 0.500         | ND        | ND      | ND      |
|                                                           | 7/28/2003  | ND          | 1.60    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 8/18/2003  | ND          | 3.70    | 1.70        | ND            | ND        | ND      | ND      |
|                                                           | 10/7/2003  | ND          | 2.20    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/31/2003 | ND          | 1.50    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 11/24/2003 | ND          | 2.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/16/2003 | ND          | 1.20    | 1.40        | ND            | ND        | 0.560   | ND      |
|                                                           | 4/7/2004   | ND          | 16.0    | 2.30        | ND            | ND        | ND      | ND      |
|                                                           | 5/14/2004  | ND          | 0.770   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/2004  | ND          | 0.780   | ND          | ND            | ND        | ND      | ND      |
| 9/10/2004                                                 | ND         | 1.40        | ND      | ND          | ND            | ND        | ND      |         |
| 10/8/2004                                                 | ND         | 0.790       | ND      | ND          | ND            | ND        | ND      |         |
| IW-1                                                      | 6/2/1998   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 1/14/1999  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| IW-2                                                      | 6/2/1998   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 1/14/1999  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| MW-1                                                      | 10/20/1988 | --          | 1.20    | --          | --            | --        | --      | --      |
|                                                           | 11/17/1988 | --          | 2.80    | --          | --            | --        | --      | --      |
|                                                           | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/19/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/14/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| 9/29/1992                                                 | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-1 (cont)                                               | 3/21/2000       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/19/2000       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/19/2000 (Dup) | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2001       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/20/2001       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/20/2001 (Dup) | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/25/2002       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/25/2002 (Dup) | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2003       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2003       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/27/2005       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/27/2005 (Dup) | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/16/2006      | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/30/2007      | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/31/2008       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2009       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009      | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010      | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011      | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013        | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| MW-12                                                     | 3/8/1989        | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/19/1989       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/22/1989       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/28/1990      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1991       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991      | --          | 1.40    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992        | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992        | --          | 1.40    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992       | --          | ND      | ND          | ND            | ND        | ND      | ND      |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-12 (cont)                                              | 6/17/1993  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/1/1993  | --          | 3.80    | 2.60        | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994   | --          | 0.500   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/11/1994  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994   | --          | 0.800   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994  | --          | 1.50    | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 2/27/1995  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1995   | --          | 0.600   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/8/1995  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/3/1997  | --          | ND      | 0.500       | ND            | ND        | ND      | ND      |
|                                                           | 3/3/1998   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/2/1998   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| 1/14/1999                                                 | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |
| MW-14                                                     | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/26/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| MW-15                                                     | 12/10/1991 | --          | 25.0    | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/10/1992  | --          | 13.7    | 3.40        | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | 1.80    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | 2.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/17/1993  | --          | 1.70    | 0.600       | ND            | ND        | ND      | ND      |
|                                                           | 12/1/1993  | --          | 11.0    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994   | --          | 1.70    | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 6/11/1994  | --          | 1.20    | 0.600       | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994   | --          | 2.20    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994  | --          | 3.20    | 0.900       | ND            | 0.600     | ND      | ND      |
|                                                           | 2/27/1995  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995   | --          | 1.30    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1995   | --          | 7.20    | 2.70        | ND            | ND        | ND      | 0.600   |
|                                                           | 12/8/1995  | --          | 7.60    | 1.70        | ND            | ND        | ND      | ND      |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-15 (cont)                                              | 3/6/1996        | --          | 1.80    | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996        | --          | 13.0    | 2.00        | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996        | --          | 49.0    | 4.80        | ND            | 0.600     | ND      | 0.500   |
|                                                           | 12/4/1996       | --          | 3.80    | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997        | --          | 1.70    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997        | --          | 0.700   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997        | --          | 92.0    | 4.40        | ND            | ND        | ND      | 0.700   |
|                                                           | 12/3/1997       | --          | 7.20    | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 3/3/1998        | --          | 1.40    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/2/1998        | --          | 7.50    | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 1/14/1999       | --          | 22.0    | 2.00        | ND            | ND        | ND      | ND      |
|                                                           | 7/28/1999       | 0.800       | 27.0    | 2.50        | ND            | ND        | ND      | ND      |
|                                                           | 8/25/1999       | 1.20        | 41.0    | 3.80        | ND            | ND        | ND      | ND      |
|                                                           | 11/9/1999       | 1.20        | 52.0    | 7.60        | ND            | ND        | ND      | ND      |
|                                                           | 3/21/2000       | ND          | 3.80    | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 9/19/2000       | 1.40        | 50.0    | 6.00        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2001       | 0.800       | 22.0    | 3.00        | ND            | ND        | ND      | ND      |
|                                                           | 9/20/2001       | ND          | 3.80    | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 3/25/2002       | ND          | 3.10    | 0.670       | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002       | ND          | 3.10    | 0.810       | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002 (Dup) | ND          | 3.00    | 0.760       | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2003       | ND          | 0.770   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2003       | ND          | 1.50    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004        | ND          | 3.70    | 1.50        | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004       | ND          | 12.0    | 1.90        | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005       | ND          | 1.40    | 0.570       | ND            | ND        | ND      | ND      |
|                                                           | 9/27/2005       | ND          | 6.80    | 0.510       | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006       | ND          | 0.680   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/16/2006      | ND          | 8.70    | 2.50        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/30/2007      | ND          | 1.60    | 1.40        | ND            | ND        | ND      | ND      |
|                                                           | 7/31/2008       | ND          | 1.40    | 0.950       | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2009       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009      | 0.500 U     | 1.92    | 2.36        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010       | 0.500 U     | 3.00    | 2.30        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010      | 0.500 U     | 0.780   | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011      | 0.500 U     | 1.10    | 1.30        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013        | 0.500 U     | 0.530   | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013       | 0.500 U     | 0.740   | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/26/2014       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-15 (cont)                                              | 11/19/2014 | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| MW-16                                                     | 1/18/2012  | 0.500 U     | 3.20    | 5.90        | 0.660         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012  | 4.60        | 600     | 350         | 32.0          | 2.00      | 11.0    | 1.00    |
|                                                           | 7/23/2012  | 2.60        | 560     | 600         | 41.0          | 5.30      | 21.0    | 1.30    |
|                                                           | 3/5/2013   | 1.40        | 450     | 620         | 29.0          | 4.60      | 17.0    | 1.80    |
|                                                           | 10/3/2013  | 0.500 U     | 33.2    | 580         | 20.0          | 2.90      | 63.8    | 1.96    |
|                                                           | 6/26/2014  | 2.50 U      | 806     | 770         | 41.4          | 4.00      | 14.6    | 2.50 U  |
|                                                           | 11/19/2014 | 2.50 U      | 51.1    | 409         | 15.4          | 2.50 U    | 49.8    | 2.50 U  |
|                                                           | 7/14/2015  | 2.50 U      | 184     | 47.4        | 8.25          | 5.95      | 111     | 2.50 U  |
|                                                           | 3/11/2016  | 2.50 U      | 437     | 168         | 16.9          | 7.30      | 12.6    | 2.50 U  |
|                                                           | 11/3/2016  | 2.50 U      | 2,340   | 153         | 49.6          | 2.50 U    | 20.2    | 2.50 U  |
|                                                           | 2/15/2018  | 8.00 U      | 978     | 220         | 50.6          | 8.00 U    | 15.1    | 8.00 U  |
|                                                           | 8/1/2018   | 4.00 U      | 835     | 392         | 53.0          | 4.00 U    | 31.6    | 4.00 U  |
|                                                           | 9/20/2018  | 2.25        | 792     | 40.7        | 46.0          | 2.00      | 34.3    | 2.00 U  |
|                                                           | 10/31/2018 | 4.00 U      | 668     | 417         | 47.3          | 4.00 U    | 33.6    | 4.00 U  |
|                                                           | 11/29/2018 | 4.00 U      | 359     | 351         | 31.0          | 4.00 U    | 28.3    | 4.00 U  |
|                                                           | 12/17/2018 | 4.00 U      | 538     | 288         | 26.2          | 4.00 U    | 4.00 U  | 4.00 U  |
|                                                           | 2/1/2019   | 4.00 U      | 343     | 190         | 16.8          | 4.00 U    | 4.00 U  | 4.00 U  |
|                                                           | 3/13/2019  | 4.00 U      | 167     | 136         | 10.7          | 4.00 U    | 4.00 U  | 4.00 U  |
|                                                           | 4/19/2019  | 0.800 U     | 206     | 180         | 13.0          | 0.800 U   | 0.800 U | 0.800 U |
|                                                           | 5/15/2019  | 0.960       | 263     | 221         | 15.0          | 0.840     | 1.98    | 0.800 U |
|                                                           | 6/21/2019  | 1.36        | 325     | 188         | 16.0          | 0.800 U   | 1.23    | 0.800 U |
|                                                           | 7/25/2019  | 1.49        | 335     | 280         | 25.5          | 1.19      | 13.6    | 0.906   |
|                                                           | 9/9/2019   | 2.00 U      | 289     | 179         | 16.0          | 2.00 U    | 2.00 U  | 2.00 U  |
|                                                           | 9/9/2019   | 2.00 U      | 289     | 179         | 16.0          | 2.00 U    | 2.00 U  | 2.00 U  |
|                                                           | 12/19/2019 | 0.800 U     | 185     | 144         | 13.3          | 0.800 U   | 0.800 U | 0.800 U |
|                                                           | 1/28/2020  | 5.00 U      | 148     | 127         | 8.82          | 2.00 U    | 2.00 U  | 2.00 U  |
|                                                           | 10/21/2020 | 2.00 U      | 451     | 380         | 30.3          | 2.00 U    | 2.50    | 2.00 U  |
|                                                           | 10/25/2021 | 0.400 U     | 29.1    | 143         | 11.0          | 0.400 U   | 29.3    | 0.633   |
|                                                           | 3/24/2023  | 0.400 U     | 107     | 158         | 12.6          | 0.650     | 12.2    | 0.500   |
|                                                           | 7/17/2023  | 25.0 U      | 25.0 U  | 501         | 32.0          | 25.0 U    | 77.0    | 25.0 U  |
|                                                           | 10/17/2023 | 4.00 U      | 4.00 U  | 4.00 U      | 6.30          | 4.00 U    | 2.00 U  | 4.00 U  |
| MW-17                                                     | 1/18/2012  | 0.500 U     | 59.0    | 580         | 22.0          | 3.30      | 54.0    | 2.00    |
|                                                           | 3/22/2012  | 0.500 U     | 0.500 U | 84.0        | 4.30          | 0.600     | 4.00    | 0.500 U |
|                                                           | 3/5/2013   | 0.500 U     | 0.500 U | 0.630       | 1.10          | 0.500 U   | 2.80    | 0.500 U |
|                                                           | 10/3/2013  | 0.500 U     | 0.620   | 1.85        | 0.630         | 0.500 U   | 4.77    | 0.500 U |
|                                                           | 6/26/2014  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 1.13    | 0.500 U |
|                                                           | 11/19/2014 | 0.500 U     | 1.07    | 3.90        | 0.570         | 0.500 U   | 3.07    | 0.500 U |
|                                                           | 11/3/2016  | 0.500 U     | 2.31    | 2.85        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 2/15/2018  | 0.400 U     | 1.82    | 0.400 U     | 0.400 U       | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 12/16/2018 | 0.400 U     | 1.52    | 2.84        | 0.400 U       | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 10/21/2020 | 0.400 U     | 2.49    | 11.6        | 1.20          | 0.400 U   | 0.400 U | 0.400 U |

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| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
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|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-17 (cont)                                              | 10/25/2021 | 0.400 U     | 2.33    | 10.8        | 1.10          | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 3/24/2023  | 0.400 U     | 2.43    | 2.78        | 0.400 U       | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 7/17/2023  | 25.0 U      | 25.0 U  | 15.5        | 25.0 U        | 25.0 U    | 25.0 U  | 25.0 U  |
|                                                           | 10/17/2023 | 0.400 U     | 14.0    | 146         | 7.03          | 0.450     | 1.81    | 0.400 U |
| MW-18                                                     | 1/18/2012  | 0.500 U     | 9.00    | 9.00        | 1.10          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012  | 0.500 U     | 11.0    | 20.0        | 1.90          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013   | 0.500 U     | 3.60    | 75.0        | 8.30          | 0.540     | 20.0    | 0.500 U |
|                                                           | 10/3/2013  | 0.500 U     | 4.57    | 33.2        | 2.31          | 0.500 U   | 1.41    | 0.500 U |
|                                                           | 6/26/2014  | 0.500 U     | 2.37    | 5.77        | 0.590         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/19/2014 | 0.500 U     | 2.38    | 7.15        | 0.680         | 0.500     | 0.500 U | 0.500 U |
|                                                           | 11/3/2016  | 0.500 U     | 3.94    | 10.8        | 1.14          | 0.500 U   | 1.39    | 0.500 U |
|                                                           | 2/15/2018  | 0.400 U     | 102     | 101         | 5.41          | 0.400 U   | 4.17    | 0.400 U |
|                                                           | 11/29/2018 | 0.400 U     | 5.46    | 13.5        | 0.594         | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 10/21/2020 | 0.400 U     | 15.2    | 83.7        | 4.64          | 0.400 U   | 2.64    | 0.400 U |
|                                                           | 10/25/2021 | 0.400 U     | 21.5    | 81.6        | 4.47          | 0.400 U   | 1.57    | 0.400 U |
|                                                           | 3/24/2023  | 0.400 U     | 313     | 575         | 42.0          | 1.19      | 72.8    | 0.750   |
|                                                           | 8/9/2023   | 0.400 U     | 21.8    | 50.4        | 3.43          | 0.400 U   | 0.210   | 0.400 U |
|                                                           | 10/17/2023 | 0.800 U     | 0.800 U | 6.40        | 0.800 U       | 0.800 U   | 1.64    | 0.800 U |
| MW-19                                                     | 1/18/2012  | 13.0        | 230     | 19.0        | 1.60          | 0.500 U   | 0.610   | 0.500 U |
|                                                           | 3/22/2012  | 13.0        | 190     | 39.0        | 1.70          | 0.500 U   | 5.20    | 0.500 U |
|                                                           | 3/5/2013   | 11.0        | 180     | 14.0        | 1.20          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013  | 8.46        | 292     | 29.9        | 1.49          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/26/2014  | 10.3        | 124     | 10.0        | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 11/19/2014 | 12.4        | 110     | 9.80        | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 11/3/2016  | 7.82        | 51.6    | 6.66        | 0.700         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 2/15/2018  | 2.06        | 18.9    | 5.07        | 0.762         | 0.400 U   | 0.858   | 0.400 U |
|                                                           | 11/29/2018 | 2.03        | 56.6    | 9.74        | 0.681         | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 10/21/2020 | 2.10        | 84.7    | 22.5        | 0.850         | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 10/25/2021 | 0.400 U     | 17.2    | 12.7        | 0.474         | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 3/24/2023  | 2.22        | 131     | 24.5        | 1.49          | 0.400 U   | 0.690   | 0.400 U |
|                                                           | 10/17/2023 | 0.400 U     | 0.400 U | 3.20 U      | 0.400 U       | 0.400 U   | 0.200 U | 0.400 U |
|                                                           | 12/7/2023  | 0.400 U     | 4.12    | 3.31        | 0.400 U       | 0.400 U   | 0.200 U | 0.400 U |
| MW-2                                                      | 10/20/1988 | --          | 1.00    | --          | --            | --        | --      | --      |
|                                                           | 11/17/1988 | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/26/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| MW-3                                                      | 10/20/1988 | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-3 (cont)                                               | 4/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/18/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/26/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| 9/29/1992                                                 | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |
| MW-4                                                      | 10/20/1988 | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/14/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| MW-5                                                      | 10/20/1988 | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/18/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/20/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/14/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/12/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| MW-6                                                      | 3/8/1989   | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/18/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1989  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990 | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/9/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| 6/5/1992                                                  | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-6 (cont)                                               | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/17/1993  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/1/1993  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/11/1994  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994  | --          | 0.600   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/27/1995  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1995   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/8/1995  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/3/1997  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/3/1998   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| 6/2/1998                                                  | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |
| 1/15/1999                                                 | --         | ND          | ND      | ND          | ND            | ND        | ND      |         |
| MW-7                                                      | 3/8/1989   | --          | 4.00    | --          | --            | --        | --      | --      |
|                                                           | 4/18/1989  | --          | 4.30    | 6.00        | ND            | ND        | ND      | ND      |
|                                                           | 5/18/1989  | --          | 6.70    | 13.0        | ND            | ND        | ND      | ND      |
|                                                           | 6/22/1989  | --          | 6.40    | 13.1        | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990 | --          | 1.80    | 2.20        | ND            | ND        | ND      | ND      |
|                                                           | 3/13/1991  | --          | ND      | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1991  | --          | 1.30    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/12/1991  | --          | 2.00    | 15.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/10/1991 | --          | 1.90    | 5.40        | ND            | ND        | ND      | ND      |
|                                                           | 3/10/1992  | --          | 0.500   | 3.80        | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | 0.500   | 5.70        | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/17/1993  | --          | ND      | 3.90        | ND            | ND        | ND      | ND      |
|                                                           | 12/1/1993  | --          | 1.20    | 3.10        | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994   | --          | 1.10    | 1.90        | ND            | ND        | ND      | ND      |
|                                                           | 6/11/1994  | --          | 1.20    | 3.40        | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994   | --          | 1.40    | 3.40        | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994  | --          | 0.800   | 1.80        | ND            | ND        | ND      | ND      |
|                                                           | 2/27/1995  | --          | 1.00    | 2.00        | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995   | --          | 1.20    | 3.20        | ND            | ND        | ND      | ND      |

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| Well                                                      | Date           | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| MW-7 (cont)                                               | 9/8/1995       | --          | 1.70    | 3.50        | ND            | ND        | ND      | ND      |
|                                                           | 12/8/1995      | --          | 1.10    | 2.00        | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1996       | --          | 0.700   | 1.80        | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996       | --          | 1.10    | 2.30        | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996       | --          | 1.20    | 3.40        | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996      | --          | ND      | 0.700       | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997       | --          | 1.00    | 1.60        | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997       | --          | 0.900   | 2.00        | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997       | --          | 1.10    | 3.00        | ND            | ND        | ND      | ND      |
|                                                           | 12/3/1997      | --          | ND      | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 3/3/1998       | --          | ND      | 0.700       | ND            | ND        | ND      | ND      |
|                                                           | 3/3/1998 (Dup) | --          | ND      | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 6/2/1998       | --          | ND      | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 6/2/1998 (Dup) | --          | ND      | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 1/14/1999      | --          | ND      | 0.700       | ND            | ND        | ND      | ND      |
| 1/14/1999 (Dup)                                           | --             | ND          | 0.900   | ND          | ND            | ND        | ND      |         |
| MW-9                                                      | 3/8/1989       | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 4/18/1989      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/17/1989      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/21/1989      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/27/1990     | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/14/1991      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| P-10                                                      | 12/4/1996      | --          | 1.80    | 1.40        | ND            | ND        | ND      | ND      |
| P-11                                                      | 12/4/1996      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| P-13                                                      | 6/3/1994       | --          | 1.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/27/1995      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1995       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/8/1995      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1996       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/3/1997      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/10/1998      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/2/1998       | --          | ND      | ND          | ND            | ND        | ND      | ND      |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date             | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                  | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                  | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                  | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                  | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                  | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                  | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| P-13 (cont)                                               | 1/15/1999        | --          | ND      | ND          | ND            | ND        | ND      | ND      |
| P-8                                                       | 12/4/1996        | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/21/2000        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2001        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/25/2002        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2003        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004         | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/16/2006       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007 (Dup)  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/30/2007       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/31/2008        | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2009        | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010        | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011        | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011 (Dup)  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011 (Dup) | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012        | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| 3/5/2013                                                  | 0.500 U          | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| 6/26/2014                                                 | 0.500 U          | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| 11/19/2014                                                | 0.500 U          | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| RW-1                                                      | 10/23/1989       | --          | 2,550   | 82.0        | 5.10          | ND        | 12.0    | 1.70    |
|                                                           | 3/7/1990         | --          | 1,100   | 52.8        | 2.60          | ND        | ND      | 1.00    |
|                                                           | 4/11/1990        | --          | 1,030   | 501         | 8.00          | ND        | 10.6    | 1.90    |
|                                                           | 12/28/1990       | --          | 690     | 51.0        | 2.00          | ND        | ND      | 3.90    |
|                                                           | 3/12/1991        | --          | 520     | 490         | ND            | ND        | ND      | 12.0    |
|                                                           | 6/17/1991        | --          | 1,600   | 69.0        | ND            | ND        | ND      | 0.700   |
|                                                           | 12/6/1991        | --          | 330     | 330         | 11.4          | 3.30      | 6.40    | 6.90    |
|                                                           | 3/9/1992         | --          | 705     | 104         | 1.10          | 3.30      | 6.40    | 2.70    |
|                                                           | 6/5/1992         | --          | 2,000   | 95.4        | 3.20          | 1.40      | ND      | 1.40    |
|                                                           | 9/29/1992        | --          | 1,000   | ND          | ND            | ND        | ND      | 3.00    |
|                                                           | 6/17/1993        | --          | 900     | 36.0        | ND            | ND        | ND      | 2.90    |
|                                                           | 12/1/1993        | --          | 980     | 37.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994         | --          | 380     | 21.0        | 0.900         | ND        | ND      | 3.80    |
|                                                           | 6/11/1994        | --          | 590     | 24.0        | ND            | ND        | ND      | 1.90    |
|                                                           | 9/8/1994         | --          | 640     | 57.0        | ND            | ND        | ND      | ND      |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-1 (cont)                                               | 12/7/1994       | --          | 480     | 23.0        | 0.500         | ND        | ND      | 3.30    |
|                                                           | 2/27/1995       | --          | 280     | 20.0        | 0.700         | ND        | ND      | 2.70    |
|                                                           | 6/7/1995        | --          | 500     | 31.0        | 0.900         | ND        | ND      | 1.90    |
|                                                           | 9/8/1995        | --          | 570     | 25.0        | 0.600         | ND        | ND      | 1.60    |
|                                                           | 12/8/1995       | --          | 560     | 19.0        | 0.700         | ND        | ND      | 1.70    |
|                                                           | 3/6/1996        | --          | 300     | 13.0        | 0.800         | ND        | ND      | 1.30    |
|                                                           | 6/6/1996        | --          | 390     | 27.0        | 1.10          | ND        | ND      | 0.700   |
|                                                           | 9/4/1996        | --          | 770     | 26.0        | 0.900         | ND        | ND      | 0.500   |
|                                                           | 12/4/1996       | --          | 590     | 22.0        | 1.00          | ND        | ND      | 1.00    |
|                                                           | 3/5/1997        | --          | 400     | 14.0        | 0.800         | ND        | ND      | 1.00    |
|                                                           | 6/4/1997        | --          | 440     | 27.0        | 5.00 U        | 5.00 U    | 5.00 U  | 5.00 U  |
|                                                           | 9/3/1997        | --          | 590     | 27.0        | 5.00 U        | 5.00 U    | 5.00 U  | 5.00 U  |
|                                                           | 12/3/1997       | --          | 170     | 7.00        | 1.00 U        | 1.00 U    | 1.00 U  | 1.00    |
|                                                           | 3/10/1998       | --          | 120     | 8.00        | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 6/3/1998        | --          | 160     | 10.0        | ND            | ND        | ND      | ND      |
|                                                           | 1/15/1999       | --          | 140     | 6.80        | ND            | ND        | ND      | 0.800   |
|                                                           | 7/28/1999       | 3.20        | 120     | 5.40        | ND            | ND        | ND      | 1.00    |
|                                                           | 8/25/1999       | 4.20        | 170     | 8.90        | ND            | ND        | ND      | 0.900   |
|                                                           | 11/9/1999       | 3.20        | 140     | 23.0        | 1.10          | ND        | ND      | 0.500   |
|                                                           | 3/21/2000       | 3.10        | 110     | 5.50        | ND            | ND        | ND      | 0.600   |
|                                                           | 3/21/2000 (Dup) | 3.20        | 110     | 5.80        | ND            | ND        | ND      | 0.700   |
|                                                           | 9/19/2000       | 4.20        | 130     | 3.70        | ND            | ND        | ND      | 0.700   |
|                                                           | 3/27/2001       | 4.10        | 92.0    | 6.70        | ND            | ND        | ND      | 0.500   |
|                                                           | 9/20/2001       | 8.00        | 280     | 4.90        | ND            | ND        | ND      | 0.890   |
|                                                           | 3/25/2002       | 2.40        | 98.0    | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 5/13/2002       | 7.50        | 220     | 4.10        | ND            | ND        | ND      | ND      |
|                                                           | 5/17/2002       | 3.20        | 97.0    | 3.80        | ND            | ND        | ND      | ND      |
|                                                           | 5/23/2002       | 1.20        | 37.0    | 3.40        | ND            | ND        | ND      | ND      |
|                                                           | 6/3/2002        | 0.920       | 50.0    | 3.40        | ND            | ND        | ND      | ND      |
|                                                           | 6/17/2002       | 3.40        | 140     | 8.40        | ND            | ND        | ND      | ND      |
|                                                           | 7/2/2002        | 8.20        | 320     | 17.0        | 0.570         | ND        | ND      | ND      |
|                                                           | 7/15/2002       | 10.0        | 510     | 21.0        | ND            | ND        | ND      | ND      |
|                                                           | 7/29/2002       | 7.10        | 290     | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 8/12/2002       | 31.0        | 1,000   | 25.0        | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2002       | 30.0        | 990     | 33.0        | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002       | 14.0        | 450     | 16.0        | 0.500         | ND        | ND      | ND      |
|                                                           | 10/14/2002      | 5.10        | 160     | 12.0        | ND            | ND        | ND      | ND      |
|                                                           | 11/4/2002       | 16.0        | 500     | 17.0        | 0.590         | ND        | ND      | 0.530   |
|                                                           | 11/25/2002      | 15.0        | 440     | 12.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/16/2002      | 13.0        | 400     | 13.0        | 0.500         | ND        | ND      | ND      |
|                                                           | 2/11/2003       | 4.00        | 110     | 5.20        | ND            | ND        | ND      | ND      |
|                                                           | 3/3/2003        | 13.0        | 350     | 6.90        | ND            | ND        | ND      | ND      |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-1 (cont)                                               | 3/24/2003       | 22.0        | 440     | 7.90        | ND            | ND        | ND      | ND      |
|                                                           | 4/14/2003       | 22.0        | 410     | 9.50        | ND            | ND        | ND      | ND      |
|                                                           | 5/5/2003        | 14.0        | 240     | 8.10        | ND            | ND        | ND      | ND      |
|                                                           | 5/28/2003       | 14.0        | 380     | 10.0        | 0.550         | ND        | ND      | ND      |
|                                                           | 6/17/2003       | 21.0        | 500     | 13.0        | ND            | ND        | ND      | ND      |
|                                                           | 7/28/2003       | 5.00        | 110     | 10.0        | ND            | ND        | ND      | ND      |
|                                                           | 8/18/2003       | 33.0        | 990     | 27.0        | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2003       | 22.0        | 750     | 26.0        | 1.60          | ND        | ND      | ND      |
|                                                           | 10/7/2003       | 1.10        | 34.0    | 4.80        | ND            | ND        | ND      | ND      |
|                                                           | 10/31/2003      | 4.20        | 150     | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 11/24/2003      | 3.20        | 100     | 10.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/16/2003      | 2.80        | 110     | 7.20        | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004        | 7.30        | 390     | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 5/14/2004       | 3.50        | 85.0    | 9.90        | ND            | ND        | ND      | ND      |
|                                                           | 6/21/2004       | 5.10        | 250     | 14.0        | ND            | ND        | ND      | ND      |
|                                                           | 9/10/2004       | 4.30        | 180     | 9.10        | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004       | 7.50        | 360     | 13.0        | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004 (Dup) | 7.70        | 380     | 14.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005       | 4.20        | 150     | 15.0        | 0.710         | ND        | 0.580   | ND      |
|                                                           | 6/21/2005       | 8.30        | 330     | 13.0        | ND            | ND        | ND      | ND      |
|                                                           | 9/27/2005       | 5.10        | 190     | 18.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006       | 4.70        | 190     | 16.0        | 0.580         | ND        | ND      | ND      |
|                                                           | 10/16/2006      | 2.30        | 110     | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007       | 4.10        | 270     | 32.0        | 1.60          | ND        | ND      | ND      |
|                                                           | 4/27/2007       | 8.10        | 710     | 240         | 7.00          | ND        | 3.60    | ND      |
|                                                           | 5/30/2007       | 6.90        | 290     | 15.0        | 0.540         | ND        | ND      | ND      |
|                                                           | 6/26/2007       | 4.90        | 220     | 22.0        | 0.620         | ND        | ND      | ND      |
|                                                           | 7/26/2007       | 6.10        | 260     | 8.80        | ND            | ND        | ND      | ND      |
|                                                           | 8/31/2007       | 4.60        | 180     | 8.30        | ND            | ND        | ND      | ND      |
|                                                           | 9/25/2007       | 9.70        | 350     | 29.0        | 0.870         | ND        | ND      | ND      |
|                                                           | 10/30/2007      | 4.90        | 190     | 15.0        | ND            | ND        | ND      | ND      |
|                                                           | 11/29/2007      | 5.30        | 200     | 12.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/19/2007      | 7.20        | 340     | 40.0        | 1.10          | ND        | ND      | ND      |
|                                                           | 2/27/2008       | 4.70        | 210     | 23.0        | 0.750         | ND        | ND      | ND      |
|                                                           | 3/31/2008       | 3.30        | 140     | 19.0        | 0.570         | ND        | ND      | ND      |
|                                                           | 4/29/2008       | 4.70        | 300     | 17.0        | 0.600         | ND        | ND      | ND      |
|                                                           | 5/27/2008       | 5.70        | 280     | 40.0        | 1.10          | ND        | ND      | ND      |
|                                                           | 6/27/2008       | 11.0        | 430     | 12.0        | ND            | ND        | ND      | ND      |
|                                                           | 7/29/2008       | 8.10        | 220     | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 8/27/2008       | 9.60        | 340     | 15.0        | ND            | ND        | ND      | ND      |
|                                                           | 9/30/2008       | 8.10        | 280     | 22.0        | 0.500         | ND        | ND      | ND      |
|                                                           | 10/28/2008      | 2.70        | 110     | 12.0        | ND            | ND        | ND      | ND      |

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| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-1 (cont)                                               | 11/25/2008      | 3.20        | 200     | 7.80        | ND            | ND        | ND      | ND      |
|                                                           | 1/5/2009        | 5.20        | 220     | 24.0        | 0.760         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 1/27/2009       | 5.40        | 230     | 36.0        | 1.10          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 2/24/2009       | 4.30        | 210     | 24.0        | 0.670         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/24/2009       | 4.10        | 190     | 12.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/24/2009 (Dup) | 3.90        | 170     | 11.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/27/2009       | 4.60        | 180     | 26.0        | 0.760         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 5/26/2009       | 4.70        | 230     | 29.0        | 0.820         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 7/6/2009        | 4.40        | 150     | 12.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 8/18/2009       | 8.40        | 270     | 13.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 9/29/2009       | 17.0        | 500     | 12.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/10/2009      | 14.0        | 420     | 23.0        | 0.800         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009      | 6.78        | 236     | 9.34        | 0.520         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 12/29/2009      | 12.0        | 270     | 28.0        | 0.780         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 2/9/2010        | 3.90        | 110     | 14.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010       | 4.60        | 140     | 16.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 5/4/2010        | 4.20        | 140     | 21.0        | 0.640         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/13/2010       | 2.70        | 82.0    | 17.0        | 0.500         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 8/10/2010       | 7.30        | 270     | 21.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010      | 18.0        | 410     | 32.0        | 0.850         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 12/7/2010       | 3.60        | 72.0    | 6.40        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 2/25/2011       | 2.40        | 73.0    | 35.0        | 0.740         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011       | 3.80        | 65.0    | 10.0        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/27/2011       | 13.0        | 190     | 23.0        | 0.710         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 8/19/2011       | 18.0        | 280     | 25.0        | 0.750         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011      | 11.0        | 230     | 44.0        | 1.00          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 12/12/2011      | 4.30        | 100     | 34.0        | 0.920         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 1/18/2012       | 3.30        | 110     | 57.0        | 1.60          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012       | 2.50        | 76.0    | 24.0        | 0.650         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 5/30/2012       | 3.98        | 70.5    | 4.87        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 7/23/2012       | 9.70        | 180     | 17.0        | 0.720         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 9/21/2012       | 13.0        | 340     | 50.0        | 1.50          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013        | 2.10        | 80.0    | 40.0        | 1.20          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013       | 7.02        | 186     | 33.8        | 0.840         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/26/2014       | 4.06        | 71.1    | 32.5        | 0.660         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/19/2014      | 2.18        | 51.4    | 35.3        | 0.770         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/3/2016       | 1.08        | 67.6    | 9.38        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 2/15/2018       | 0.620       | 10.7    | 62.9        | 1.46          | 0.400 U   | 0.858   | 0.400 U |
|                                                           | 12/16/2018      | 2.11        | 26.8    | 22.6        | 0.673         | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 10/21/2020      | 1.63        | 14.3    | 9.10        | 0.400 U       | 0. 4 U    | 0.400 U | 0.400 U |
|                                                           | 10/25/2021      | 1.50        | 38.3    | 18.1        | 0.400 U       | 0. 4 U    | 0.400 U | 0.400 U |
|                                                           | 3/24/2023       | 1.74        | 26.0    | 23.6        | 0.500         | 0.400 U   | 0.400 U | 0.400 U |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-1 (cont)                                               | 7/17/2023       | 0.810       | 29.1    | 26.4        | 0.730         | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/17/2023      | 1.19        | 25.5    | 17.8        | 0.880         | 0.400 U   | 0.250   | 0.400 U |
| RW-2                                                      | 10/17/1989      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/31/1990      | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/12/1991       | --          | 5.10    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/18/1991       | --          | 1.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991       | --          | ND      | 0.700       | ND            | ND        | ND      | ND      |
|                                                           | 12/6/1991       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/9/1992        | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992        | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/17/1993       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/1/1993       | --          | ND      | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994        | --          | 0.800   | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 6/11/1994       | --          | 0.600   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994        | --          | 0.600   | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994       | --          | ND      | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 2/27/1995       | --          | ND      | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995        | --          | 1.00    | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1995        | --          | 0.800   | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 12/8/1995       | --          | ND      | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1996        | --          | 0.700   | 0.600       | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996        | --          | ND      | 0.700       | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996        | --          | 0.700   | 0.700       | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996       | --          | ND      | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997        | --          | 0.900   | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997        | --          | ND      | 0.800       | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997        | --          | ND      | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 12/3/1997       | --          | ND      | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 3/10/1998       | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/3/1998        | --          | 0.500   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 1/15/1999       | --          | 1.70    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/28/1999       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/28/1999 (Dup) | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 8/25/1999       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 11/9/1999       | ND          | ND      | 0.500       | ND            | ND        | ND      | ND      |
|                                                           | 3/21/2000       | ND          | 1.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/19/2000       | ND          | 0.600   | 0.900       | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2001       | ND          | ND      | 0.500       | ND            | ND        | ND      | ND      |
|                                                           | 9/20/2001       | ND          | ND      | 1.00        | ND            | ND        | ND      | ND      |
|                                                           | 3/25/2002       | ND          | ND      | 0.570       | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002       | ND          | ND      | 1.00        | ND            | ND        | ND      | ND      |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-2 (cont)                                               | 3/24/2003  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2003  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004   | ND          | 0.680   | 1.90        | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/27/2005  | ND          | ND      | 0.870       | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006  | ND          | 0.500   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/16/2006 | ND          | ND      | 1.30        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/30/2007 | ND          | ND      | 0.700       | ND            | ND        | ND      | ND      |
|                                                           | 7/31/2008  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2009  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009 | 0.500 U     | 0.500 U | 0.960       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010  | 0.500 U     | 0.500 U | 1.40        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010 | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011 | 0.500 U     | 0.500 U | 1.30        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012  | 0.500 U     | 0.500 U | 0.960       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013   | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| 6/26/2014                                                 | 0.500 U    | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| 11/19/2014                                                | 0.500 U    | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U |         |
| RW-3                                                      | 10/23/1989 | --          | 2.50    | 13.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/31/1990 | --          | 8.40    | 4.90        | ND            | ND        | ND      | 1.00    |
|                                                           | 3/12/1991  | --          | 21.0    | ND          | ND            | ND        | ND      | 2.30    |
|                                                           | 6/18/1991  | --          | 3.80    | 6.40        | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | 16.0    | 32.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/6/1991  | --          | ND      | 68.4        | 1.30          | ND        | ND      | 12.0    |
|                                                           | 3/9/1992   | --          | 5.80    | 31.7        | ND            | ND        | ND      | 3.00    |
|                                                           | 6/5/1992   | --          | 1.20    | 34.3        | ND            | ND        | ND      | 4.40    |
|                                                           | 9/29/1992  | --          | 4.00    | 23.0        | ND            | ND        | ND      | 2.00    |
|                                                           | 6/17/1993  | --          | 5.70    | 24.0        | ND            | ND        | ND      | 8.00    |
|                                                           | 12/1/1993  | --          | 3.70    | 29.0        | 0.800         | ND        | ND      | 7.40    |
|                                                           | 3/2/1994   | --          | 7.50    | 22.0        | 0.600         | ND        | ND      | 4.40    |
|                                                           | 6/11/1994  | --          | 8.60    | 21.0        | ND            | ND        | ND      | 2.40    |
|                                                           | 9/8/1994   | --          | 3.60    | 28.0        | 0.500         | ND        | ND      | 5.00    |
|                                                           | 12/7/1994  | --          | 4.00    | 19.0        | 0.600         | ND        | ND      | 4.70    |
|                                                           | 2/27/1995  | --          | 4.00    | 12.0        | ND            | ND        | ND      | 3.40    |
|                                                           | 6/7/1995   | --          | 3.90    | 15.0        | ND            | ND        | ND      | 3.00    |
|                                                           | 9/8/1995   | --          | 1.70    | 9.30        | ND            | ND        | ND      | 2.20    |
|                                                           | 12/8/1995  | --          | 2.30    | 7.90        | ND            | ND        | ND      | 3.20    |
|                                                           | 3/6/1996   | --          | 3.20    | 6.20        | ND            | ND        | ND      | 1.80    |

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| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-3 (cont)                                               | 6/6/1996        | --          | 2.90    | 8.70        | ND            | ND        | ND      | 1.70    |
|                                                           | 9/4/1996        | --          | 3.90    | 14.0        | ND            | ND        | ND      | 1.30    |
|                                                           | 12/4/1996       | --          | 3.60    | 12.0        | ND            | ND        | ND      | 1.30    |
|                                                           | 3/5/1997        | --          | 2.60    | 6.90        | ND            | ND        | ND      | 1.50    |
|                                                           | 6/4/1997        | --          | 1.90    | 6.40        | ND            | ND        | ND      | 1.40    |
|                                                           | 9/3/1997        | --          | 3.00    | 10.0        | ND            | ND        | ND      | 1.00    |
|                                                           | 12/3/1997       | --          | 3.20    | 9.20        | ND            | 0.900     | ND      | ND      |
|                                                           | 3/10/1998       | --          | 1.30    | 5.80        | ND            | ND        | ND      | 1.00    |
|                                                           | 6/3/1998        | --          | 1.50    | 7.10        | ND            | ND        | ND      | 0.700   |
|                                                           | 1/15/1999       | --          | 3.70    | 6.80        | ND            | ND        | ND      | 0.800   |
|                                                           | 7/28/1999       | ND          | 2.00    | 6.70        | ND            | ND        | ND      | 0.700   |
|                                                           | 8/25/1999       | ND          | 1.80    | 6.30        | ND            | ND        | ND      | ND      |
|                                                           | 11/9/1999       | ND          | 1.40    | 5.80        | ND            | ND        | ND      | 0.500   |
|                                                           | 3/21/2000       | ND          | 2.00    | 5.10        | ND            | ND        | ND      | 0.600   |
|                                                           | 9/19/2000       | ND          | 1.50    | 3.60        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2001       | ND          | 1.10    | 3.70        | ND            | ND        | ND      | 0.600   |
|                                                           | 9/20/2001       | ND          | 1.40    | 3.20        | ND            | ND        | ND      | 0.570   |
|                                                           | 3/25/2002       | ND          | 0.840   | 2.60        | ND            | ND        | ND      | ND      |
|                                                           | 9/23/2002       | ND          | ND      | 4.80        | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2003       | ND          | 0.570   | 3.50        | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2003       | ND          | ND      | 3.00        | ND            | ND        | ND      | ND      |
|                                                           | 9/16/2003 (Dup) | ND          | ND      | 3.20        | ND            | ND        | ND      | ND      |
|                                                           | 4/7/2004        | ND          | 0.510   | 2.80        | ND            | ND        | ND      | ND      |
|                                                           | 10/8/2004       | ND          | ND      | 3.10        | ND            | ND        | ND      | ND      |
|                                                           | 3/29/2005       | ND          | ND      | 1.90        | ND            | ND        | ND      | ND      |
|                                                           | 9/27/2005       | ND          | 0.620   | 3.80        | ND            | ND        | ND      | ND      |
|                                                           | 3/28/2006       | ND          | ND      | 0.580       | ND            | ND        | ND      | ND      |
|                                                           | 10/16/2006      | ND          | ND      | 2.10        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2007       | ND          | ND      | 1.10        | ND            | ND        | ND      | ND      |
|                                                           | 10/30/2007      | ND          | ND      | 0.770       | ND            | ND        | ND      | ND      |
|                                                           | 7/31/2008       | ND          | ND      | 1.60        | ND            | ND        | ND      | ND      |
|                                                           | 3/24/2009       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/23/2009      | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2010       | 0.500 U     | 0.500 U | 0.500       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010      | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011      | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012       | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013        | 0.500 U     | 0.500 U | 0.560       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013       | 0.500 U     | 0.500 U | 0.560       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013 (Dup) | 0.500 U     | 0.500 U | 0.660       | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/26/2014       | 0.500 U     | 0.500 U | 1.03        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-3 (cont)                                               | 11/19/2014      | 0.500 U     | 0.500 U | 1.07        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| RW-4                                                      | 10/27/1989      | --          | 60.0    | 158         | 3.70          | ND        | 41.0    | 5.00    |
|                                                           | 11/3/1989       | --          | 225     | 236         | 9.90          | 4.80      | 125     | 4.70    |
|                                                           | 12/28/1990      | --          | 77.9    | 17.9        | 1.90          | ND        | 11.1    | 8.00    |
|                                                           | 3/13/1991       | --          | 140     | ND          | ND            | ND        | ND      | 3.00    |
|                                                           | 6/17/1991       | --          | 138     | 60.0        | 0.500         | ND        | ND      | 1.80    |
|                                                           | 9/13/1991       | --          | 68.0    | 86.0        | 5.00          | ND        | 12.0    | 6.00    |
|                                                           | 12/9/1991       | --          | 2.20    | 2.30        | ND            | ND        | ND      | ND      |
|                                                           | 3/9/1992        | --          | 82.9    | 91.2        | 1.80          | ND        | 3.20    | 5.10    |
|                                                           | 6/5/1992        | --          | 140     | 45.8        | ND            | ND        | ND      | 0.900   |
|                                                           | 9/29/1992       | --          | 130     | 52.0        | 0.800         | ND        | ND      | 5.00    |
|                                                           | 6/17/1993       | --          | 100     | 39.0        | ND            | ND        | ND      | 5.30    |
|                                                           | 12/1/1993       | --          | 200     | 24.0        | 1.00          | ND        | ND      | ND      |
|                                                           | 3/2/1994        | --          | 59.0    | 9.80        | ND            | ND        | ND      | 2.90    |
|                                                           | 6/11/1994       | --          | 110     | 28.0        | 1.70          | ND        | 1.00    | 3.70    |
|                                                           | 9/8/1994        | --          | 220     | 34.0        | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994       | --          | 51.0    | 32.0        | 2.50          | ND        | 1.40    | 4.30    |
|                                                           | 2/27/1995       | --          | 14.0    | 26.0        | 1.00          | ND        | ND      | 4.40    |
|                                                           | 6/7/1995        | --          | 47.0    | 31.0        | 0.800         | ND        | ND      | 1.60    |
|                                                           | 9/8/1995        | --          | 17.0    | 32.0        | 0.900         | ND        | ND      | 1.70    |
|                                                           | 12/8/1995       | --          | 40.0    | 40.0        | 1.10          | ND        | ND      | 2.80    |
|                                                           | 3/6/1996        | --          | 28.0    | 30.0        | 1.60          | ND        | ND      | 2.00    |
|                                                           | 6/6/1996        | --          | 25.0    | 27.0        | 1.50          | ND        | ND      | 1.70    |
|                                                           | 9/4/1996        | --          | 0.500   | 31.0        | 1.40          | ND        | ND      | 2.00    |
|                                                           | 12/4/1996       | --          | 44.0    | 33.0        | 2.10          | ND        | ND      | 1.40    |
|                                                           | 3/5/1997        | --          | 30.0    | 29.0        | 2.20          | ND        | ND      | 2.30    |
|                                                           | 6/4/1997        | --          | 32.0    | 28.0        | 1.70          | ND        | ND      | 1.50    |
|                                                           | 9/3/1997        | --          | 43.0    | 38.0        | 2.10          | ND        | ND      | 1.60    |
|                                                           | 12/3/1997       | --          | 20.0    | 21.0        | 1.30          | ND        | ND      | 1.60    |
|                                                           | 3/10/1998       | --          | 28.0    | 20.0        | 1.20          | ND        | ND      | 1.30    |
|                                                           | 6/3/1998        | --          | 24.0    | 20.0        | 1.00          | ND        | ND      | 0.800   |
|                                                           | 1/15/1999       | --          | 27.0    | 17.0        | 1.10          | ND        | ND      | 1.20    |
|                                                           | 7/28/1999       | ND          | 45.0    | 15.0        | 1.10          | ND        | ND      | ND      |
|                                                           | 8/25/1999       | ND          | 58.0    | 43.0        | 1.80          | ND        | ND      | 1.00    |
|                                                           | 11/9/1999       | ND          | 20.0    | 58.0        | 2.30          | ND        | ND      | 0.600   |
|                                                           | 3/21/2000       | ND          | 37.0    | 18.0        | 1.00          | ND        | ND      | 1.00    |
|                                                           | 3/27/2001       | 2.30        | 77.0    | 21.0        | 1.20          | ND        | ND      | 1.00    |
|                                                           | 3/27/2001 (Dup) | 2.40        | 74.0    | 21.0        | 1.20          | ND        | ND      | 1.00    |
|                                                           | 3/25/2002       | 2.40        | 1.20    | 12.0        | 0.620         | ND        | 2.60    | 0.560   |
|                                                           | 5/13/2002       | ND          | 8.20    | 3.90        | ND            | ND        | ND      | 0.740   |
|                                                           | 5/17/2002       | ND          | 2.90    | 1.60        | ND            | ND        | ND      | 0.510   |
|                                                           | 5/23/2002       | ND          | 1.10    | 0.670       | ND            | ND        | ND      | 0.620   |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date             | VOCs (ug/L) |         |             |               |           |         |         |         |
|-----------------------------------------------------------|------------------|-------------|---------|-------------|---------------|-----------|---------|---------|---------|
|                                                           |                  | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |         |
|                                                           |                  | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |         |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                  | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |         |
| Groundwater in an Excavation <sup>1</sup>                 |                  | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |         |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                  | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |         |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                  | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |         |
| RW-4 (cont)                                               | 6/3/2002         | ND          | ND      | ND          | ND            | ND        | ND      | 0.550   |         |
|                                                           | 6/17/2002        | ND          | 2.80    | 4.80        | ND            | ND        | 0.580   | ND      |         |
|                                                           | 7/2/2002         | ND          | 2.50    | 5.30        | ND            | ND        | 0.830   | ND      |         |
|                                                           | 7/15/2002        | ND          | 5.40    | 9.60        | 0.690         | ND        | 2.40    | ND      |         |
|                                                           | 7/29/2002        | ND          | 23.0    | 21.0        | 1.60          | 0.930     | 4.30    | 0.770   |         |
|                                                           | 8/12/2002        | ND          | 4.60    | 4.90        | ND            | ND        | ND      | 0.630   |         |
|                                                           | 9/16/2002        | ND          | 10.0    | 25.0        | 1.40          | ND        | 2.80    | 0.740   |         |
|                                                           | 9/23/2002        | ND          | 4.90    | 9.40        | 0.520         | ND        | 1.10    | 0.770   |         |
|                                                           | 10/14/2002       | ND          | ND      | ND          | ND            | ND        | ND      | ND      |         |
|                                                           | 11/4/2002        | ND          | 1.30    | 1.70        | ND            | ND        | ND      | ND      |         |
|                                                           | 11/25/2002       | ND          | 29.0    | 21.0        | 1.80          | 0.700     | 2.10    | 1.00    |         |
|                                                           | 12/16/2002       | ND          | 14.0    | 20.0        | 1.20          | ND        | 1.10    | 0.750   |         |
|                                                           | 2/11/2003        | ND          | 23.0    | 21.0        | 1.70          | 0.750     | 2.00    | 0.710   |         |
|                                                           | 3/3/2003         | ND          | 55.0    | 21.0        | 0.760         | 0.590     | ND      | 0.630   |         |
|                                                           | 3/24/2003        | ND          | 34.0    | 26.0        | 1.70          | 0.780     | 1.80    | 0.670   |         |
|                                                           | 4/14/2003        | ND          | 28.0    | 23.0        | 1.60          | 0.890     | 2.10    | 0.580   |         |
|                                                           | 5/5/2003         | ND          | 2.70    | 17.0        | 1.30          | ND        | 7.60    | ND      |         |
|                                                           | 5/28/2003        | ND          | 20.0    | 23.0        | 1.50          | 0.720     | 4.50    | 0.590   |         |
|                                                           | 6/17/2003        | ND          | 8.90    | 13.0        | 1.40          | ND        | 2.40    | 0.760   |         |
|                                                           | 7/28/2003        | ND          | 18.0    | 14.0        | ND            | ND        | ND      | 0.720   |         |
|                                                           | 8/18/2003        | ND          | 5.40    | 15.0        | 0.760         | ND        | 3.80    | 1.10    |         |
|                                                           | 9/16/2003        | ND          | 1.10    | 4.40        | ND            | ND        | 1.10    | 1.00    |         |
|                                                           | 10/7/2003        | ND          | 0.890   | 2.10        | ND            | ND        | ND      | 0.590   |         |
|                                                           | 10/31/2003       | ND          | 0.540   | 2.00        | ND            | ND        | ND      | 1.10    |         |
|                                                           | 11/24/2003       | ND          | ND      | 4.80        | 0.630         | ND        | ND      | 1.40    |         |
|                                                           | 12/16/2003       | ND          | 2.10    | 40.0        | 2.80          | ND        | 6.30    | 1.50    |         |
|                                                           | 4/7/2004         | ND          | 7.00    | 42.0        | 2.70          | ND        | 3.40    | ND      |         |
|                                                           | 5/14/2004        | ND          | 0.660   | 15.0        | 1.30          | ND        | 3.80    | ND      |         |
|                                                           | 6/21/2004        | ND          | 18.0    | 42.0        | 3.30          | 0.530     | 2.00    | 0.510   |         |
|                                                           | 9/10/2004        | ND          | 1.80    | 5.40        | ND            | ND        | ND      | ND      |         |
|                                                           | 10/8/2004        | ND          | 2.10    | 16.0        | 1.10          | ND        | 2.90    | 0.610   |         |
|                                                           | 3/29/2005        | ND          | 1.50    | 17.0        | 1.50          | ND        | 3.40    | ND      |         |
|                                                           | 6/21/2005        | ND          | 0.690   | 42.0        | 3.20          | ND        | 4.50    | 0.550   |         |
|                                                           | 9/27/2005        | ND          | 1.00    | 13.0        | 1.50          | ND        | 0.710   | 0.640   |         |
|                                                           | 3/28/2006        | ND          | 6.30    | 66.0        | 5.00          | 0.520     | ND      | ND      |         |
|                                                           | 10/16/2006       | ND          | 1.20    | 44.0        | 3.60          | ND        | 2.00    | ND      |         |
|                                                           | 3/27/2007        | ND          | ND      | 17.0        | 2.00          | ND        | 2.80    | ND      |         |
|                                                           | 10/30/2007       | ND          | ND      | 0.580       | ND            | ND        | ND      | ND      |         |
|                                                           | 7/31/2008        | ND          | ND      | 5.50        | ND            | ND        | ND      | ND      |         |
|                                                           | 3/24/2009        |             | 0.500 U | 0.500 U     | 2.80          | 0.500 U   | 0.500 U | 0.500 U | 0.500 U |
|                                                           | 11/23/2009       |             | 0.500 U | 0.500 U     | 0.590         | 0.500 U   | 0.500 U | 0.500 U | 0.500 U |
|                                                           | 11/23/2009 (Dup) |             | 0.500 U | 0.500 U     | 0.730         | 0.500 U   | 0.500 U | 0.500 U | 0.500 U |

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VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| RW-4 (cont)                                               | 3/22/2010  | 0.500 U     | 0.500 U | 1.70        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010 | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 4/26/2011  | 0.500 U     | 0.500 U | 2.90        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011 | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/22/2012  | 0.500 U     | 0.500 U | 2.90        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013  | 0.500 U     | 0.500 U | 1.43        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/26/2014  | 0.500 U     | 0.500 U | 2.46        | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/21/2020 | 0.400 U     | 0.400 U | 2.35        | 0.400 U       | 0.400 U   | 0.400 U | 0.400 U |
| Supply Well 1 (SW-1)                                      | 10/20/1988 | --          | 1.00    | --          | --            | --        | --      | --      |
|                                                           | 11/17/1988 | --          | 9.00    | --          | --            | --        | --      | --      |
|                                                           | 11/29/1988 | --          | 4.10    | --          | --            | --        | --      | --      |
|                                                           | 11/29/1988 | --          | 4.20    | --          | --            | --        | --      | --      |
|                                                           | 1/5/1989   | --          | 1.80    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/23/1989  | --          | 2.30    | --          | --            | --        | --      | --      |
|                                                           | 6/17/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/13/1991  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/6/1991  | --          | 1.10    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/11/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/5/1992   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/1992  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/17/1993  | --          | --      | --          | --            | --        | --      | --      |
|                                                           | 12/1/1993  | --          | 1.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 1/25/1994  | --          | 0.700   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/2/1994   | --          | 1.20    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/11/1994  | --          | 1.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1994   | --          | 0.600   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/7/1994  | --          | 0.800   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/27/1995  | --          | 0.800   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/7/1995   | --          | 0.800   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/8/1995   | --          | 0.600   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/8/1995  | --          | 0.800   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/6/1996   | --          | 1.00    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/6/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/4/1996   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/4/1996  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/5/1997   | --          | 0.600   | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/4/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/3/1997   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/3/1997  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/10/1998  | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/3/1998   | --          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 1/15/1999  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |

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Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date       | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |            | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |            | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |            | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |            | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |            | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |            | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| Supply Well 1 (SW-1)<br>(cont)                            | 9/7/1999   | ND          | 1.60    | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/19/2002  | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 6/28/2002  | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 9/23/2002  | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 1/13/2003  | ND          | ND      | --          | ND            | ND        | ND      | ND      |
|                                                           | 4/29/2003  | --          | ND      | --          | --            | --        | --      | --      |
|                                                           | 7/28/2003  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 10/31/2003 | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/30/2004  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/24/2004  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/8/2004  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/7/2005   | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 6/22/2005  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/29/2005  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 2/13/2006  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/24/2006  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 7/10/2006  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 11/1/2006  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 1/29/2007  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 5/21/2007  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/19/2007  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 12/12/2007 | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 3/13/2008  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 4/24/2008  | ND          | ND      | ND          | ND            | ND        | ND      | ND      |
|                                                           | 9/15/2008  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 12/2/2008  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 3/20/2009  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 5/8/2009   | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 9/16/2009  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 12/23/2009 | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 2/5/2010   | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 4/30/2010  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 6/3/2011   | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 3/9/2012   | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 5/10/2012  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 12/21/2012 | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 3/28/2013  | 1.00 U      | 1.00 U  | 1.00 U      | 1.00 U        | 1.00 U    | 1.00 U  | 1.00 U  |
|                                                           | 6/21/2013  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 9/27/2013  | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 12/20/2013 | 0.500 U     | 0.500 U | 0.500 U     | 0.500 U       | 0.500 U   | 0.500 U | 0.500 U |
| Supply Well 2 (SW-2)                                      | 9/30/1997  | --          | ND      | ND          | ND            | ND        | ND      | ND      |

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| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |       |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|-------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |       |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |       |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |       |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |       |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |       |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |       |
| Z-1                                                       | 10/20/1988      | --          | 610     | --          | --            | --        | --      | --      |       |
|                                                           | 11/17/1988      | --          | 1,070   | --          | --            | --        | --      | --      |       |
|                                                           | 2/1/1989        | --          | 206     | --          | --            | --        | --      | --      |       |
|                                                           | 2/14/1989       | --          | 421     | --          | --            | --        | --      | --      |       |
|                                                           | 2/18/1989       | --          | 686     | --          | --            | --        | --      | --      |       |
|                                                           | 2/24/1989       | --          | 422     | --          | --            | --        | 34.0    | --      |       |
|                                                           | 3/24/1989       | --          | 119     | 142         | ND            | ND        | ND      | 1.00    |       |
|                                                           | 5/18/1989       | --          | 224     | 171         | 6.00          | ND        | 16.0    | 7.50    |       |
|                                                           | 6/9/1989        | --          | 283     | 172         | 4.60          | 2.10      | 14.0    | 3.30    |       |
|                                                           | 8/17/1989       | --          | 326     | 100         | 6.00          | 2.00      | 22.0    | 1.00    |       |
|                                                           | 12/28/1990      | --          | 260     | 18.4        | 1.10          | ND        | 21.4    | 6.50    |       |
|                                                           | 3/12/1991       | --          | 460     | ND          | ND            | ND        | ND      | 8.40    |       |
|                                                           | 6/18/1991       | --          | 47.0    | 36.0        | ND            | ND        | ND      | 1.50    |       |
|                                                           | 9/13/1991       | --          | 82.0    | 74.0        | 5.00          | 3.00      | 13.0    | 10.0    |       |
|                                                           | 12/6/1991       | --          | 240     | 210         | 3.60          | ND        | ND      | 6.10    |       |
|                                                           | 3/9/1992        | --          | 45.6    | 84.6        | 1.40          | ND        | 7.90    | 5.90    |       |
|                                                           | 6/5/1992        | --          | 55.4    | 68.7        | 0.800         | 1.40      | ND      | 1.40    |       |
|                                                           | 9/29/1992       | --          | 12.0    | 20.0        | ND            | ND        | ND      | 3.00    |       |
|                                                           | 6/17/1993       | --          | 35.0    | 35.0        | 1.60          | ND        | 4.80    | 8.00    |       |
|                                                           | 12/1/1993       | --          | 130     | 17.0        | ND            | 1.00      | ND      | ND      |       |
|                                                           | 3/2/1994        | --          | 46.0    | 19.0        | 0.800         | ND        | ND      | 4.00    |       |
|                                                           | 6/11/1994       | --          | 23.0    | 13.0        | 0.800         | ND        | 1.30    | 5.10    |       |
|                                                           | 9/8/1994        | --          | 230     | 32.0        | ND            | ND        | ND      | ND      |       |
|                                                           | 2/27/1995       | --          | 93.0    | 43.0        | 3.50          | 0.500     | 0.900   | 4.80    |       |
|                                                           | 6/7/1995        | --          | 480     | 59.0        | 5.20          | 1.00      | 2.00    | 3.70    |       |
|                                                           | 9/8/1995        | --          | 130     | 29.0        | 2.40          | ND        | ND      | 1.80    |       |
|                                                           | 12/8/1995       | --          | 120     | 51.0        | 4.70          | 0.800     | 1.20    | 3.10    |       |
|                                                           | 3/6/1996        | --          | 57.0    | 34.0        | 1.90          | ND        | ND      | 2.10    |       |
|                                                           | 6/6/1996        | --          | 63.0    | 40.0        | 3.10          | 0.900     | 2.30    | 2.00    |       |
|                                                           | 9/4/1996        | --          | 490     | 54.0        | 4.60          | ND        | 1.40    | 2.10    |       |
|                                                           | 12/4/1996       | --          | 50.0    | 7.20        | ND            | ND        | ND      | ND      |       |
|                                                           | 3/5/1997        | --          | 81.0    | 17.0        | 0.700         | ND        | ND      | 1.10    |       |
|                                                           | 6/4/1997        | --          | 67.0    | 25.0        | 1.30          | ND        | ND      | 1.80    |       |
|                                                           | 9/3/1997        | --          | 71.0    | 37.0        | 1.70          | ND        | ND      | ND      |       |
|                                                           | 12/3/1997       | --          | 88.0    | 33.0        | 1.30          | 0.700     | 1.60    | 1.50    |       |
|                                                           | 3/10/1998       | --          | 44.0    | 19.0        | 0.800         | ND        | ND      | 0.800   |       |
|                                                           | 6/3/1998        | --          | 16.0    | 10.0        | ND            | ND        | ND      | ND      |       |
|                                                           | 1/15/1999       | --          | 27.0    | 10.0        | ND            | ND        | ND      | ND      |       |
|                                                           | 7/28/1999       |             | 0.700   | 57.0        | 13.0          | 0.800     | ND      | 0.600   | 1.00  |
|                                                           | 8/25/1999       |             | ND      | 90.0        | 42.0          | 2.10      | ND      | ND      | 0.600 |
|                                                           | 8/25/1999 (Dup) |             | ND      | 97.0        | 42.0          | 2.20      | ND      | ND      | 0.600 |
|                                                           | 11/9/1999       |             | ND      | 94.0        | 64.0          | 4.60      | 0.900   | 2.20 J  | 0.700 |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| Z-1 (cont)                                                | 11/9/1999 (Dup) | ND          | 91.0    | 60.0        | 3.70          | 0.500     | 1.00 J  | 0.500   |
|                                                           | 3/21/2000       | 0.700       | 43.0    | 11.0        | ND            | ND        | ND      | ND      |
|                                                           | 3/27/2001       | 3.50        | 180     | 12.0        | 0.600         | ND        | ND      | 0.600   |
|                                                           | 3/25/2002       | 0.930       | 80.0    | 25.0        | 1.60          | ND        | 0.730   | 0.980   |
|                                                           | 5/13/2002       | 0.500       | 58.0    | 20.0        | 1.70          | ND        | 0.940   | 0.820   |
|                                                           | 5/17/2002       | ND          | 12.0    | 7.60        | 0.750         | ND        | ND      | 0.870   |
|                                                           | 5/23/2002       | ND          | 4.80    | 4.10        | ND            | ND        | ND      | 0.710   |
|                                                           | 6/3/2002        | ND          | 4.30    | 3.60        | ND            | ND        | ND      | 0.550   |
|                                                           | 6/17/2002       | ND          | 2.40    | 2.00        | ND            | ND        | ND      | ND      |
|                                                           | 7/2/2002        | ND          | 48.0    | 21.0        | 1.90          | ND        | 1.40    | 0.720   |
|                                                           | 7/15/2002       | 0.570       | 45.0    | 16.0        | 1.30          | ND        | ND      | 0.710   |
|                                                           | 7/29/2002       | ND          | 26.0    | 13.0        | 0.950         | ND        | ND      | 0.800   |
|                                                           | 8/12/2002       | ND          | 37.0    | 16.0        | ND            | ND        | ND      | 0.840   |
|                                                           | 9/16/2002       | ND          | 30.0    | 22.0        | 2.30          | ND        | 0.540   | 1.10    |
|                                                           | 9/23/2002       | ND          | 110     | 73.0        | 5.20          | 0.520     | 2.40    | 1.10    |
|                                                           | 10/14/2002      | ND          | 72.0    | 62.0        | 3.70          | 0.580     | 2.10    | 0.630   |
|                                                           | 11/4/2002       | ND          | 48.0    | 31.0        | 2.40          | 0.580     | 0.980   | 1.30    |
|                                                           | 11/25/2002      | ND          | 56.0    | 25.0        | 1.90          | 0.530     | 0.950   | 1.30    |
|                                                           | 12/16/2002      | ND          | 43.0    | 27.0        | 1.10          | 0.570     | ND      | 1.20    |
|                                                           | 2/11/2003       | ND          | 25.0    | 19.0        | 0.770         | ND        | 0.540   | 0.740   |
|                                                           | 3/3/2003        | ND          | 33.0    | 25.0        | 1.70          | 0.830     | 2.20    | 0.730   |
|                                                           | 3/24/2003       | 0.600       | 58.0    | 18.0        | ND            | 0.660     | ND      | ND      |
|                                                           | 4/14/2003       | 1.40        | 78.0    | 25.0        | 1.10          | 1.10      | 0.740   | 0.530   |
|                                                           | 5/5/2003        | 0.550       | 56.0    | 35.0        | 1.60          | 0.770     | 1.30    | 0.550   |
|                                                           | 5/28/2003       | 3.30        | 74.0    | 28.0        | 1.60          | 0.600     | 1.10    | 0.650   |
|                                                           | 6/17/2003       | 0.810       | 46.0    | 20.0        | 1.50          | ND        | ND      | 1.00    |
|                                                           | 7/28/2003       | ND          | 9.40    | 9.60        | ND            | ND        | ND      | 0.640   |
|                                                           | 8/18/2003       | ND          | 16.0    | 18.0        | 1.10          | ND        | ND      | 1.20    |
|                                                           | 9/16/2003       | ND          | 4.80    | 9.60        | 1.00          | ND        | ND      | 0.630   |
|                                                           | 10/7/2003       | ND          | 4.70    | 11.0        | 1.30          | ND        | ND      | ND      |
|                                                           | 10/31/2003      | ND          | 4.20    | 7.00        | 0.740         | ND        | ND      | 0.520   |
|                                                           | 11/24/2003      | ND          | 5.80    | 8.60        | 0.900         | ND        | ND      | 0.640   |
|                                                           | 12/16/2003      | ND          | 23.0    | 24.0        | 2.00          | ND        | 0.640   | 0.690   |
|                                                           | 4/7/2004        | ND          | 56.0    | 43.0        | 3.10          | ND        | 1.30    | 0.920   |
|                                                           | 4/7/2004 (Dup)  | ND          | 34.0    | 26.0        | 1.80          | ND        | 0.720   | 1.10    |
|                                                           | 5/14/2004       | ND          | 9.60    | 14.0        | 1.10          | ND        | ND      | ND      |
|                                                           | 6/21/2004       | ND          | 10.0    | 7.70        | 0.510         | ND        | ND      | ND      |
|                                                           | 9/10/2004       | ND          | 26.0    | 25.0        | 2.20          | ND        | ND      | 0.560   |
|                                                           | 10/8/2004       | ND          | 30.0    | 47.0        | 3.70          | ND        | 0.640   | 0.560   |
|                                                           | 3/29/2005       | ND          | 21.0    | 35.0        | 2.70          | ND        | 0.570   | ND      |
|                                                           | 3/29/2005 (Dup) | ND          | 22.0    | 37.0        | 3.20          | ND        | 0.570   | ND      |
|                                                           | 6/21/2005       | ND          | 46.0    | 79.0        | 6.40          | 0.550     | 1.10    | 0.840   |

Table 3  
VOC Concentrations in Groundwater – Historical Summary for All Wells  
Oregon Tool - International Way Facility, Milwaukie, Oregon

| Well                                                      | Date            | VOCs (ug/L) |         |             |               |           |         |         |
|-----------------------------------------------------------|-----------------|-------------|---------|-------------|---------------|-----------|---------|---------|
|                                                           |                 | PCE         | TCE     | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE   | VC      | 1,1-DCA |
|                                                           |                 | 127-18-4    | 79-01-6 | 156-59-2    | 156-60-5      | 75-35-4   | 75-01-4 | 75-34-3 |
| Volatilization to Outdoor Air - Occupational <sup>1</sup> |                 | >S          | 20,000  | >S          | >S            | 2,400,000 | 5,900   | 68,000  |
| Groundwater in an Excavation <sup>1</sup>                 |                 | 5,600       | 430     | 18,000      | 180,000       | 44,000    | 960     | 10,000  |
| Commercial Chronic Vapor Intrusion RBCwi <sup>2</sup>     |                 | 130         | 13      | 1,800       | 750           | 1,300     | 3.3     | 55      |
| Commercial Acute Vapor Intrusion RBCwi <sup>2</sup>       |                 | 330         | 27      | --          | 10,000        | 890       | 4,600   | --      |
| Z-1 (cont)                                                | 9/27/2005       | ND          | 6.60    | 16.0        | 1.60          | ND        | ND      | ND      |
|                                                           | 3/28/2006       | ND          | 56.0    | 83.0        | 7.20          | 0.630     | ND      | ND      |
|                                                           | 3/28/2006 (Dup) | ND          | 61.0    | 94.0        | 7.50          | 0.690     | ND      | ND      |
|                                                           | 10/16/2006      | ND          | 10.0    | 24.0        | 2.20          | ND        | ND      | ND      |
|                                                           | 3/27/2007       | ND          | 46.0    | 66.0        | 3.40          | ND        | ND      | ND      |
|                                                           | 10/30/2007      | ND          | 66.0    | 100         | 5.50          | 0.690     | 0.770   | ND      |
|                                                           | 7/31/2008       | ND          | 39.0    | 86.0        | 5.30          | 0.520     | 0.920   | ND      |
|                                                           | 3/24/2009       | 0.500 U     | 42.0    | 70.0        | 4.00          | 0.570     | 0.500   | 0.500 U |
|                                                           | 11/23/2009      | 0.500 U     | 48.7    | 130         | 5.74          | 0.510     | 0.540   | 0.500 U |
|                                                           | 3/22/2010       | 0.500 U     | 32.0    | 67.0        | 3.70          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/12/2010      | 0.500 U     | 47.0    | 150         | 8.10          | 0.620     | 0.530   | 0.500 U |
|                                                           | 4/26/2011       | 0.500 U     | 25.0    | 59.0        | 3.20          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/20/2011      | 0.500 U     | 60.0    | 160         | 8.90          | 0.780     | 0.700   | 0.500 U |
|                                                           | 3/22/2012       | 0.500 U     | 24.0    | 78.0        | 3.80          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 3/5/2013        | 0.500 U     | 14.0    | 78.0        | 3.70          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 10/3/2013       | 0.500 U     | 10.2    | 112         | 5.26          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 6/26/2014       | 0.500 U     | 0.500 U | 52.2        | 2.41          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 11/19/2014      | 0.500 U     | 11.9    | 58.7        | 2.97          | 0.500 U   | 0.500 U | 0.500 U |
|                                                           | 12/16/2018      | 0.400 U     | 14.6    | 60.1        | 3.21          | 0.400 U   | 0.400 U | 0.400 U |
|                                                           | 10/21/2020      | 0.400 U     | 2.88    | 59.9        | 1.97          | 0.400 U   | 0.400 U | 0.400 U |

Notes:

Shaded Bold = detection limit or analyte concentration exceeds at least one RBC

<sup>1</sup> = Oregon Department of Environmental Quality Risk-Based Concentrations for Individual Chemicals, August 2023.

<sup>2</sup> = Oregon Department of Environmental Quality Chronic and Acute Vapor Intrusion Risk-Based Concentrations, March 2024.

Injection of enhanced reductive dechlorination amendment occurred on April 15, 22, and 28, 2023

Abbreviations:

-- = not measured

µg/L = micrograms per liter

>S = RBC exceeds the solubility limit

DCA = dichloroethane

DCE = dichloroethene

ERD = enhanced reductive dechlorination

ND = historical data not detected at or above the detection limit; detection limit unknown

PCE = tetrachloroethene

RBC = Oregon Department of Environmental Quality Risk-Based Concentration

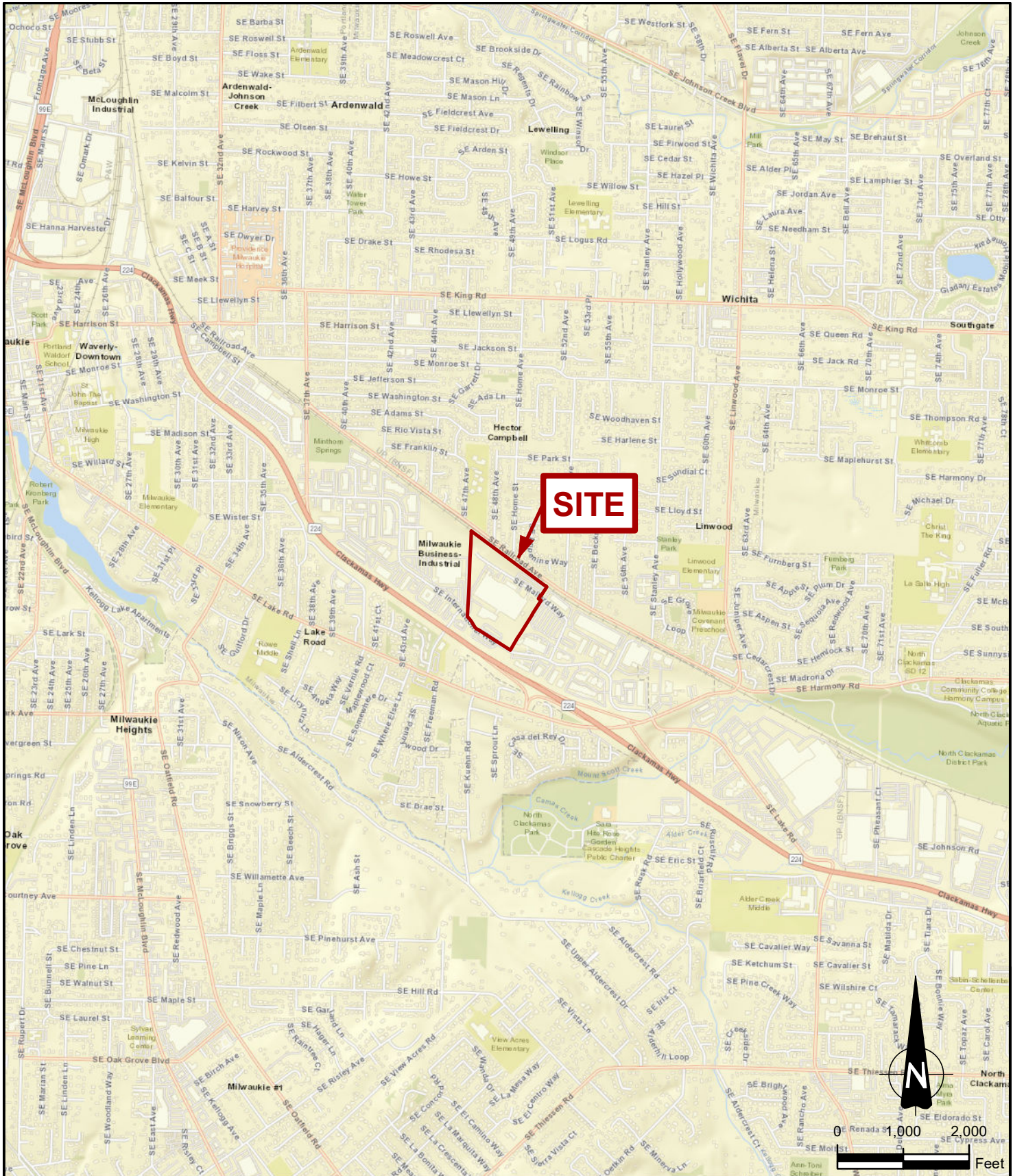
TCE = trichloroethene

TOC = total organic carbon

U = analyte not detected at or above the given detection limit

VC = vinyl chloride

# FIGURES



OREGON CUTTING  
SYSTEMS

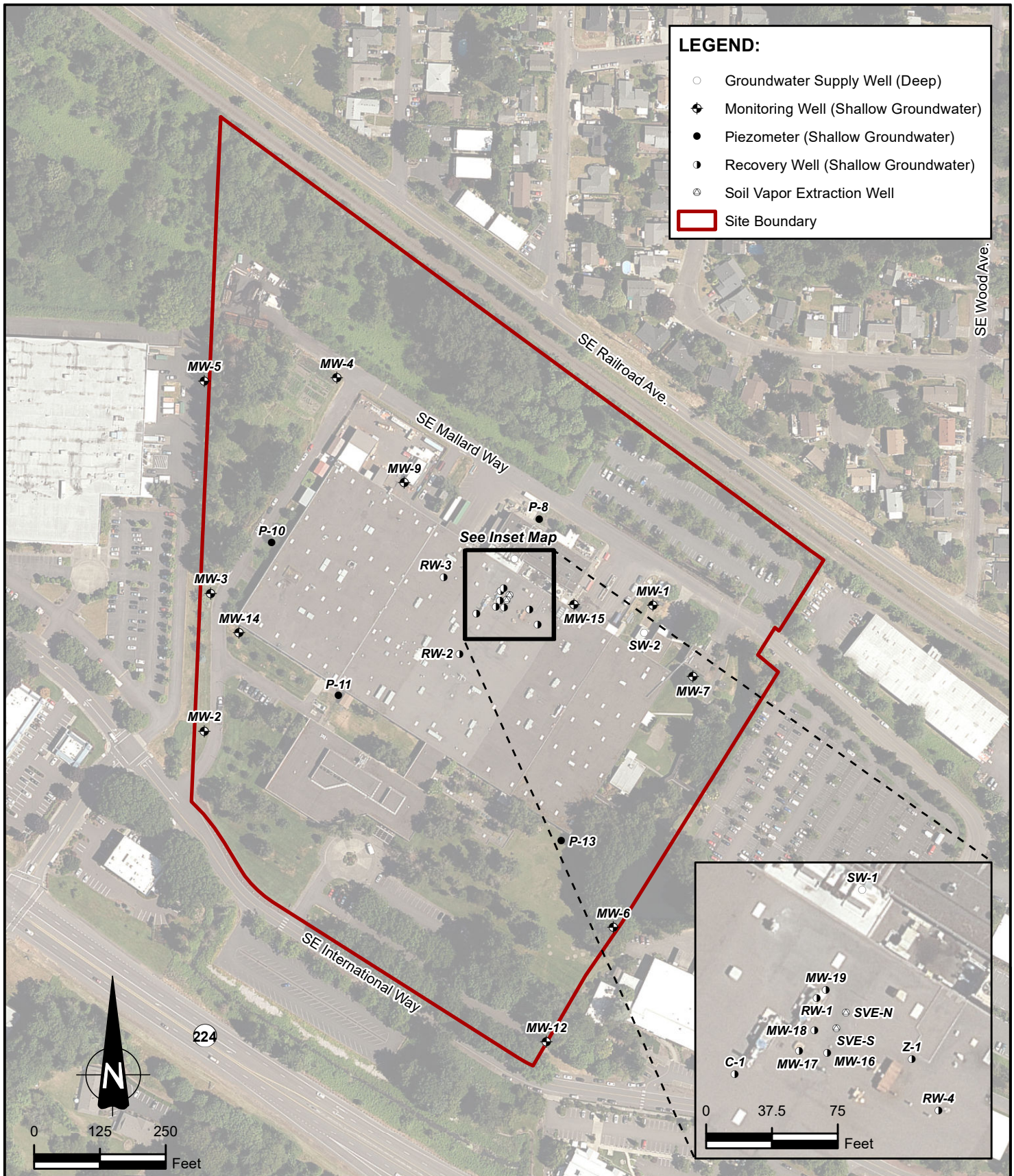
WSP USA  
15862 SW 72nd Ave., Suite 150  
Portland, OR 97224



OREGON TOOL - INTERNATIONAL WAY  
FORMER OREGON CUTTING SYSTEMS  
MILWAUKIE, OREGON

SITE LOCATION MAP

|             |                 |
|-------------|-----------------|
| DATE        | JULY 2024       |
| SCALE       | 1" = 2,000 feet |
| PROJECT NO. | 461M114814      |
| FIGURE      | 1               |



OREGON CUTTING  
SYSTEMS

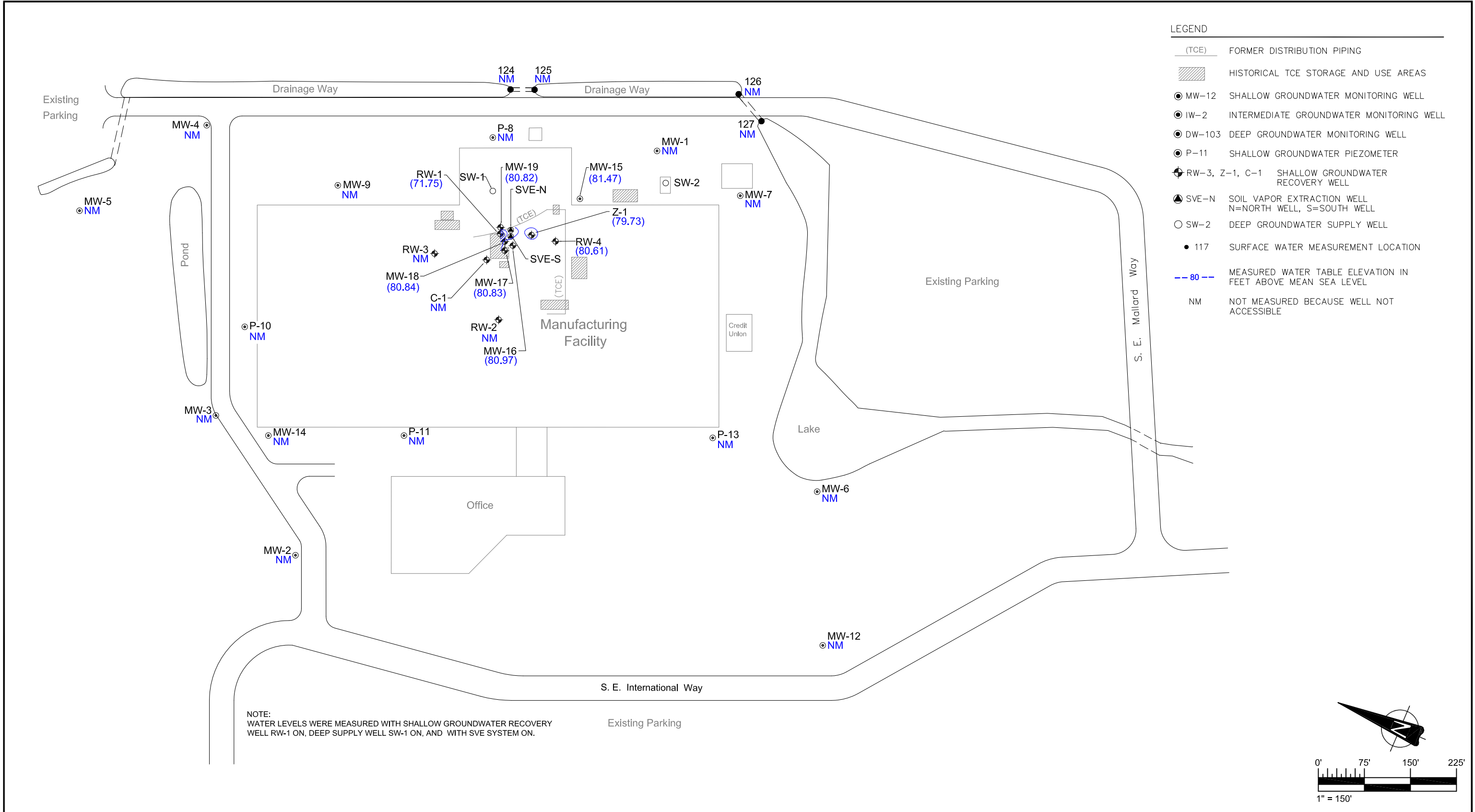
WSP USA  
15862 SW 72nd Ave., Suite 150  
Portland, OR 97224

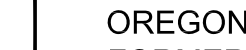


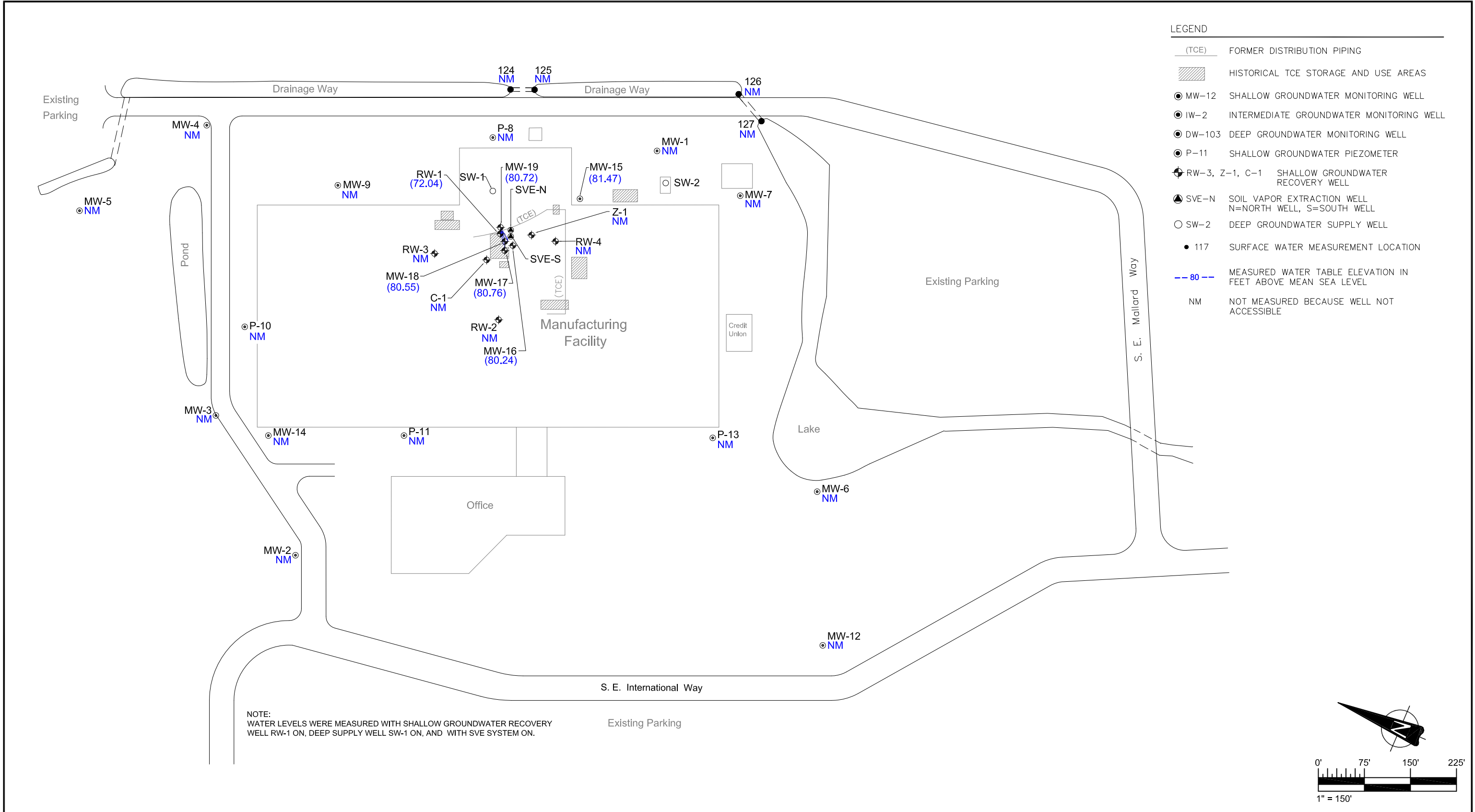
OREGON TOOL - INTERNATIONAL WAY  
FORMER OREGON CUTTING SYSTEMS  
MILWAUKIE, OREGON

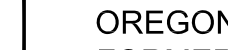
SITE PLAN

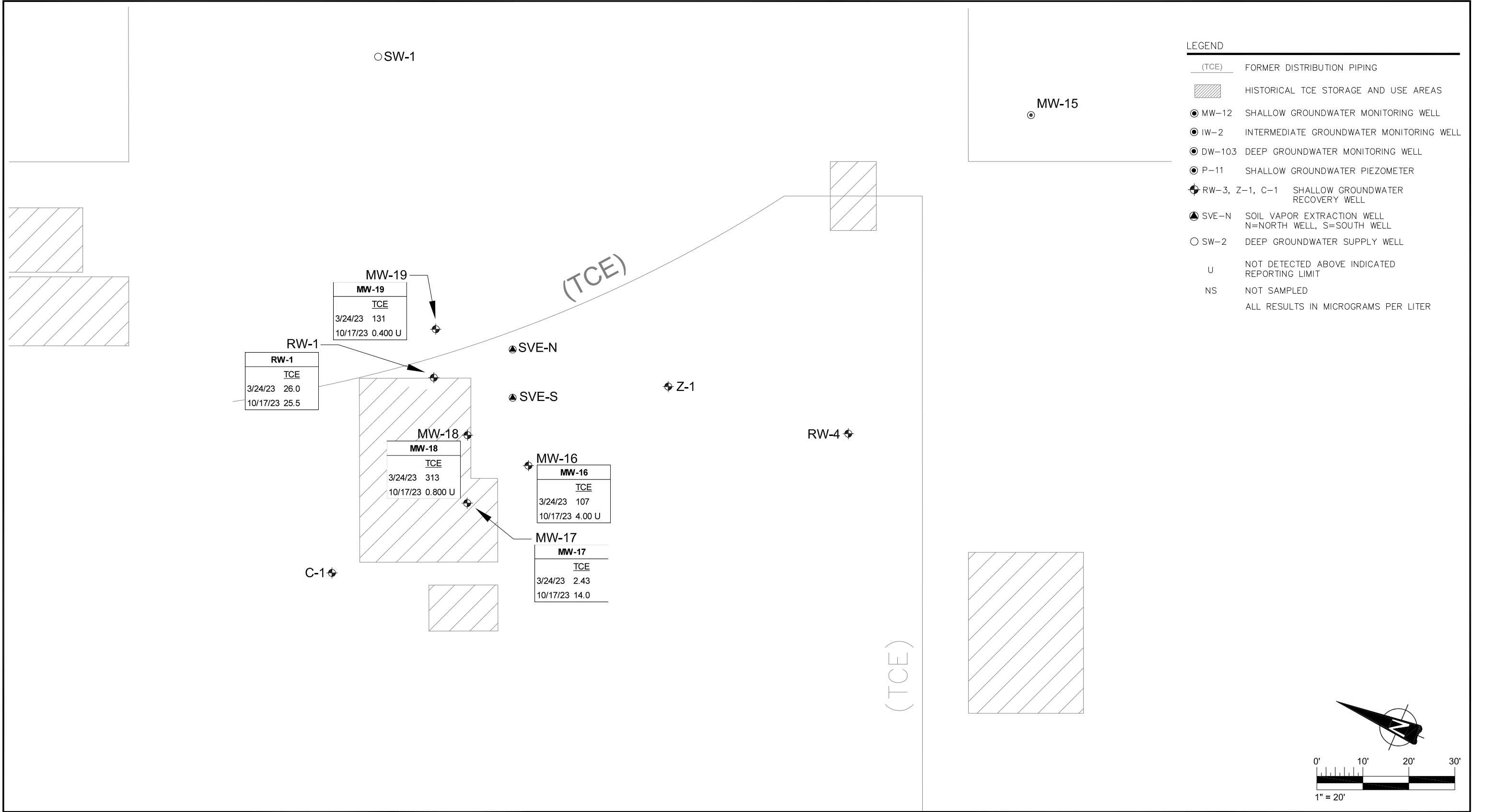
|             |               |
|-------------|---------------|
| DATE        | AUGUST 2024   |
| SCALE       | 1" = 250 feet |
| PROJECT NO. | 461M114814    |
| FIGURE      | 2             |



|  |                                                            |                                                                                       |                                                                                       |             |
|--|------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|
|  | OREGON CUTTING SYSTEMS                                     |  | OREGON TOOL - INTERNATIONAL WAY<br>FORMER OREGON CUTTING SYSTEMS<br>MILWAUKIE, OREGON | DATE        |
|  |                                                            |                                                                                       |                                                                                       | JULY 2024   |
|  | WSP<br>15862 SW 72nd Ave., Suite 150<br>Portland, OR 97224 |                                                                                       | WATER TABLE ELEVATIONS<br>MARCH 24, 2023                                              | SCALE       |
|  |                                                            |                                                                                       |                                                                                       | 1" = 150'   |
|  |                                                            |                                                                                       |                                                                                       | PROJECT NO. |
|  |                                                            |                                                                                       |                                                                                       | 461M114814  |
|  |                                                            |                                                                                       |                                                                                       | FIGURE      |
|  |                                                            |                                                                                       |                                                                                       | 3           |



|  |                                                            |                                                                                       |                                                                                       |             |
|--|------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|
|  | OREGON CUTTING SYSTEMS                                     |  | OREGON TOOL - INTERNATIONAL WAY<br>FORMER OREGON CUTTING SYSTEMS<br>MILWAUKIE, OREGON | DATE        |
|  |                                                            |                                                                                       |                                                                                       | JULY 2024   |
|  | WSP<br>15862 SW 72nd Ave., Suite 150<br>Portland, OR 97224 |                                                                                       | WATER TABLE ELEVATIONS<br>OCTOBER 17, 2023                                            | SCALE       |
|  |                                                            |                                                                                       |                                                                                       | 1" = 150'   |
|  |                                                            |                                                                                       |                                                                                       | PROJECT NO. |
|  |                                                            |                                                                                       |                                                                                       | 461M114814  |
|  |                                                            |                                                                                       |                                                                                       | FIGURE      |
|  |                                                            |                                                                                       |                                                                                       | 4           |



|  |                                                            |                                                                                       |                                                                                       |                           |  |
|--|------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------|--|
|  | OREGON CUTTING SYSTEMS                                     |  | OREGON TOOL - INTERNATIONAL WAY<br>FORMER OREGON CUTTING SYSTEMS<br>MILWAUKIE, OREGON | JULY 2024                 |  |
|  |                                                            |                                                                                       |                                                                                       | SCALE<br>1" = 20'         |  |
|  | WSP<br>15862 SW 72nd Ave., Suite 150<br>Portland, OR 97224 |                                                                                       | RW-1 AREA TCE EXTENT                                                                  | PROJECT NO.<br>461M114814 |  |
|  |                                                            |                                                                                       |                                                                                       | FIGURE<br>5               |  |

DRAWN BY: SD CHECKED BY: JK

# **APPENDIX A**

## LABORATORY REPORTS



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

Saturday, April 8, 2023

Russ Bunker

WSP USA Environment & Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

RE: A3C0961 - OCS - 461M114811

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3C0961, which was received by the laboratory on 3/27/2023 at 1:25:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

---

Cooler Receipt Information

(See Cooler Receipt Form for details)

Default Cooler

1.1 degC

---

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

---



Apex Laboratories

Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 461M114811  
Project Manager: Russ Bunker

Report ID:  
A3C0961 - 04 08 23 2122

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

| Client Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|------------------|---------------|--------|----------------|----------------|
| RW1-20230324     | A3C0961-01    | Water  | 03/24/23 13:30 | 03/27/23 13:25 |
| MW16-20230324    | A3C0961-02    | Water  | 03/24/23 14:30 | 03/27/23 13:25 |
| MW17-20230324    | A3C0961-03    | Water  | 03/24/23 11:15 | 03/27/23 13:25 |
| MW18-20230324    | A3C0961-04    | Water  | 03/24/23 10:30 | 03/27/23 13:25 |
| MW19-20230324    | A3C0961-05    | Water  | 03/24/23 12:30 | 03/27/23 13:25 |

Apex Laboratories

Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3C0961 - 04 08 23 2122**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Sample Result | Detection Limit      | Reporting Limit | Units | Dilution              | Date Analyzed  | Method Ref. | Notes |
|----------------------------------|---------------|----------------------|-----------------|-------|-----------------------|----------------|-------------|-------|
| <b>RW1-20230324 (A3C0961-01)</b> |               | <b>Matrix: Water</b> |                 |       | <b>Batch: 23C1174</b> |                |             |       |
| Acetone                          | ND            | ---                  | 20.0            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Acrylonitrile                    | ND            | ---                  | 2.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Benzene                          | ND            | ---                  | 0.200           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Bromobenzene                     | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Bromochloromethane               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Bromodichloromethane             | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Bromoform                        | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Bromomethane                     | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 2-Butanone (MEK)                 | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| n-Butylbenzene                   | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| sec-Butylbenzene                 | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| tert-Butylbenzene                | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Carbon disulfide                 | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Carbon tetrachloride             | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Chlorobenzene                    | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Chloroethane                     | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Chloroform                       | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Chloromethane                    | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 2-Chlorotoluene                  | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 4-Chlorotoluene                  | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Dibromochloromethane             | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane      | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)          | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Dibromomethane                   | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2-Dichlorobenzene              | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,3-Dichlorobenzene              | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,4-Dichlorobenzene              | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| Dichlorodifluoromethane          | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1-Dichloroethane               | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)         | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1-Dichloroethene               | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| cis-1,2-Dichloroethene           | 23.6          | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |
| trans-1,2-Dichloroethene         | 0.500         | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:00 | EPA 8260D   |       |

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503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Sample Result | Detection Limit | Reporting Limit | Units | Dilution       | Date Analyzed  | Method Ref. | Notes |
|--------------------------------|---------------|-----------------|-----------------|-------|----------------|----------------|-------------|-------|
| RW1-20230324 (A3C0961-01)      |               | Matrix: Water   |                 |       | Batch: 23C1174 |                |             |       |
| 1,2-Dichloropropane            | ND            | ---             | 0.500           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,3-Dichloropropane            | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 2,2-Dichloropropane            | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1-Dichloropropene            | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| cis-1,3-Dichloropropene        | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| trans-1,3-Dichloropropene      | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Ethylbenzene                   | ND            | ---             | 0.500           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Hexachlorobutadiene            | ND            | ---             | 5.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 2-Hexanone                     | ND            | ---             | 10.0            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Isopropylbenzene               | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 4-Isopropyltoluene             | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Methylene chloride             | ND            | ---             | 10.0            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MIBK)    | ND            | ---             | 10.0            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE) | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Naphthalene                    | ND            | ---             | 2.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| n-Propylbenzene                | ND            | ---             | 0.500           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Styrene                        | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane      | ND            | ---             | 0.400           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane      | ND            | ---             | 0.500           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Tetrachloroethene (PCE)        | 1.74          | ---             | 0.400           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Toluene                        | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene         | ND            | ---             | 2.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene         | ND            | ---             | 2.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1,1-Trichloroethane          | ND            | ---             | 0.400           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,1,2-Trichloroethane          | ND            | ---             | 0.500           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Trichloroethene (TCE)          | 26.0          | ---             | 0.400           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Trichlorofluoromethane         | ND            | ---             | 2.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2,3-Trichloropropane         | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,2,4-Trimethylbenzene         | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| 1,3,5-Trimethylbenzene         | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| Vinyl chloride                 | ND            | ---             | 0.400           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| m,p-Xylene                     | ND            | ---             | 1.00            | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |
| o-Xylene                       | ND            | ---             | 0.500           | ug/L  | 1              | 03/30/23 00:00 | EPA 8260D   |       |

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503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3C0961 - 04 08 23 2122**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit      | Reporting Limit  | Units | Dilution              | Date Analyzed  | Method Ref. | Notes |
|---------------------------------------|---------------|----------------------|------------------|-------|-----------------------|----------------|-------------|-------|
| <b>RW1-20230324 (A3C0961-01)</b>      |               | <b>Matrix: Water</b> |                  |       | <b>Batch: 23C1174</b> |                |             |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 101 %      | Limits: 80-120 % | 1     | 03/30/23 00:00        | EPA 8260D      |             |       |
| Toluene-d8 (Surr)                     |               | 102 %                | 80-120 %         | 1     | 03/30/23 00:00        | EPA 8260D      |             |       |
| 4-Bromofluorobenzene (Surr)           |               | 99 %                 | 80-120 %         | 1     | 03/30/23 00:00        | EPA 8260D      |             |       |
| <b>MW16-20230324 (A3C0961-02RE1)</b>  |               | <b>Matrix: Water</b> |                  |       | <b>Batch: 23D0057</b> |                |             |       |
| Acetone                               | ND            | ---                  | 20.0             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Acrylonitrile                         | ND            | ---                  | 2.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Benzene                               | ND            | ---                  | 0.200            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Bromobenzene                          | ND            | ---                  | 0.500            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Bromochloromethane                    | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Bromodichloromethane                  | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Bromoform                             | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Bromomethane                          | ND            | ---                  | 5.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 2-Butanone (MEK)                      | ND            | ---                  | 10.0             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| n-Butylbenzene                        | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| sec-Butylbenzene                      | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| tert-Butylbenzene                     | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Carbon disulfide                      | ND            | ---                  | 10.0             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Carbon tetrachloride                  | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Chlorobenzene                         | ND            | ---                  | 0.500            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Chloroethane                          | ND            | ---                  | 5.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Chloroform                            | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Chloromethane                         | ND            | ---                  | 5.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 2-Chlorotoluene                       | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 4-Chlorotoluene                       | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Dibromochloromethane                  | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane           | ND            | ---                  | 5.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)               | ND            | ---                  | 0.500            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Dibromomethane                        | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2-Dichlorobenzene                   | ND            | ---                  | 0.500            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 1,3-Dichlorobenzene                   | ND            | ---                  | 0.500            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| 1,4-Dichlorobenzene                   | ND            | ---                  | 0.500            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| Dichlorodifluoromethane               | ND            | ---                  | 1.00             | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |
| <b>1,1-Dichloroethane</b>             | <b>0.500</b>  | ---                  | 0.400            | ug/L  | 1                     | 04/04/23 04:31 | EPA 8260D   |       |

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|--------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| MW16-20230324 (A3C0961-02RE1)  |               |                 |                 | Matrix: Water |          | Batch: 23D0057 |             |       |
| 1,2-Dichloroethane (EDC)       | ND            | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,1-Dichloroethene             | 0.650         | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| cis-1,2-Dichloroethene         | 158           | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| trans-1,2-Dichloroethene       | 12.6          | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2-Dichloropropane            | ND            | ---             | 0.500           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,3-Dichloropropane            | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 2,2-Dichloropropane            | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,1-Dichloropropene            | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| cis-1,3-Dichloropropene        | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| trans-1,3-Dichloropropene      | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Ethylbenzene                   | ND            | ---             | 0.500           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Hexachlorobutadiene            | ND            | ---             | 5.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 2-Hexanone                     | ND            | ---             | 10.0            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Isopropylbenzene               | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 4-Isopropyltoluene             | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Methylene chloride             | ND            | ---             | 10.0            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MIBK)    | ND            | ---             | 10.0            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE) | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Naphthalene                    | ND            | ---             | 2.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| n-Propylbenzene                | ND            | ---             | 0.500           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Styrene                        | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane      | ND            | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane      | ND            | ---             | 0.500           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Tetrachloroethene (PCE)        | ND            | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Toluene                        | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene         | ND            | ---             | 2.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene         | ND            | ---             | 2.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,1,1-Trichloroethane          | ND            | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,1,2-Trichloroethane          | ND            | ---             | 0.500           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Trichloroethene (TCE)          | 107           | ---             | 0.400           | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| Trichlorofluoromethane         | ND            | ---             | 2.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2,3-Trichloropropane         | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |
| 1,2,4-Trimethylbenzene         | ND            | ---             | 1.00            | ug/L          | 1        | 04/04/23 04:31 | EPA 8260D   |       |

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## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit | Reporting Limit | Units   | Dilution       | Date Analyzed  | Method Ref.    | Notes     |
|---------------------------------------|---------------|-----------------|-----------------|---------|----------------|----------------|----------------|-----------|
| MW16-20230324 (A3C0961-02RE1)         |               | Matrix: Water   |                 |         | Batch: 23D0057 |                |                |           |
| 1,3,5-Trimethylbenzene                | ND            | ---             | 1.00            | ug/L    | 1              | 04/04/23 04:31 | EPA 8260D      |           |
| Vinyl chloride                        | 12.2          | ---             | 0.400           | ug/L    | 1              | 04/04/23 04:31 | EPA 8260D      |           |
| m,p-Xylene                            | ND            | ---             | 1.00            | ug/L    | 1              | 04/04/23 04:31 | EPA 8260D      |           |
| o-Xylene                              | ND            | ---             | 0.500           | ug/L    | 1              | 04/04/23 04:31 | EPA 8260D      |           |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery:       | 102 %           | Limits: | 80-120 %       | 1              | 04/04/23 04:31 | EPA 8260D |
| Toluene-d8 (Surr)                     |               |                 | 101 %           |         | 80-120 %       | 1              | 04/04/23 04:31 | EPA 8260D |
| 4-Bromofluorobenzene (Surr)           |               |                 | 108 %           |         | 80-120 %       | 1              | 04/04/23 04:31 | EPA 8260D |
| MW17-20230324 (A3C0961-03)            |               | Matrix: Water   |                 |         | Batch: 23C1174 |                |                |           |
| Acetone                               | ND            | ---             | 20.0            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Acrylonitrile                         | ND            | ---             | 2.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Benzene                               | ND            | ---             | 0.200           | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Bromobenzene                          | ND            | ---             | 0.500           | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Bromochloromethane                    | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Bromodichloromethane                  | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Bromoform                             | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Bromomethane                          | ND            | ---             | 5.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| 2-Butanone (MEK)                      | ND            | ---             | 10.0            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| n-Butylbenzene                        | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| sec-Butylbenzene                      | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| tert-Butylbenzene                     | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Carbon disulfide                      | ND            | ---             | 10.0            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Carbon tetrachloride                  | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Chlorobenzene                         | ND            | ---             | 0.500           | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Chloroethane                          | ND            | ---             | 5.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Chloroform                            | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Chloromethane                         | ND            | ---             | 5.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| 2-Chlorotoluene                       | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| 4-Chlorotoluene                       | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Dibromochloromethane                  | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| 1,2-Dibromo-3-chloropropane           | ND            | ---             | 5.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| 1,2-Dibromoethane (EDB)               | ND            | ---             | 0.500           | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| Dibromomethane                        | ND            | ---             | 1.00            | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |
| 1,2-Dichlorobenzene                   | ND            | ---             | 0.500           | ug/L    | 1              | 03/30/23 00:22 | EPA 8260D      |           |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3C0961 - 04 08 23 2122**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                           | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|-----------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW17-20230324 (A3C0961-03)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23C1174</b> |             |       |
| 1,3-Dichlorobenzene               | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,4-Dichlorobenzene               | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Dichlorodifluoromethane           | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1-Dichloroethane                | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)          | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1-Dichloroethene                | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| <b>cis-1,2-Dichloroethene</b>     | <b>2.78</b>   | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| trans-1,2-Dichloroethene          | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,2-Dichloropropane               | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,3-Dichloropropane               | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 2,2-Dichloropropane               | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1-Dichloropropene               | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| cis-1,3-Dichloropropene           | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| trans-1,3-Dichloropropene         | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Ethylbenzene                      | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Hexachlorobutadiene               | ND            | ---             | 5.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 2-Hexanone                        | ND            | ---             | 10.0            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Isopropylbenzene                  | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 4-Isopropyltoluene                | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Methylene chloride                | ND            | ---             | 10.0            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MiBK)       | ND            | ---             | 10.0            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE)    | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Naphthalene                       | ND            | ---             | 2.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| n-Propylbenzene                   | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Styrene                           | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane         | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane         | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Tetrachloroethene (PCE)           | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| Toluene                           | ND            | ---             | 1.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene            | ND            | ---             | 2.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene            | ND            | ---             | 2.00            | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1,1-Trichloroethane             | ND            | ---             | 0.400           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |
| 1,1,2-Trichloroethane             | ND            | ---             | 0.500           | ug/L                 | 1        | 03/30/23 00:22        | EPA 8260D   |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit      | Reporting Limit | Units            | Dilution              | Date Analyzed  | Method Ref. | Notes |
|---------------------------------------|---------------|----------------------|-----------------|------------------|-----------------------|----------------|-------------|-------|
| <b>MW17-20230324 (A3C0961-03)</b>     |               | <b>Matrix: Water</b> |                 |                  | <b>Batch: 23C1174</b> |                |             |       |
| Trichloroethene (TCE)                 | 2.43          | ---                  | 0.400           | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| Trichlorofluoromethane                | ND            | ---                  | 2.00            | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| 1,2,3-Trichloropropane                | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| 1,2,4-Trimethylbenzene                | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| 1,3,5-Trimethylbenzene                | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| Vinyl chloride                        | ND            | ---                  | 0.400           | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| m,p-Xylene                            | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| o-Xylene                              | ND            | ---                  | 0.500           | ug/L             | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 99 %       |                 | Limits: 80-120 % | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| Toluene-d8 (Surr)                     |               | 102 %                |                 | 80-120 %         | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| 4-Bromofluorobenzene (Surr)           |               | 98 %                 |                 | 80-120 %         | 1                     | 03/30/23 00:22 | EPA 8260D   |       |
| <b>MW18-20230324 (A3C0961-04)</b>     |               | <b>Matrix: Water</b> |                 |                  | <b>Batch: 23C1174</b> |                |             |       |
| Acetone                               | ND            | ---                  | 20.0            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Acrylonitrile                         | ND            | ---                  | 2.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Benzene                               | ND            | ---                  | 0.200           | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Bromobenzene                          | ND            | ---                  | 0.500           | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Bromochloromethane                    | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Bromodichloromethane                  | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Bromoform                             | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Bromomethane                          | ND            | ---                  | 5.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 2-Butanone (MEK)                      | ND            | ---                  | 10.0            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| n-Butylbenzene                        | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| sec-Butylbenzene                      | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| tert-Butylbenzene                     | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Carbon disulfide                      | ND            | ---                  | 10.0            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Carbon tetrachloride                  | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Chlorobenzene                         | ND            | ---                  | 0.500           | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Chloroethane                          | ND            | ---                  | 5.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Chloroform                            | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Chloromethane                         | ND            | ---                  | 5.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 2-Chlorotoluene                       | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 4-Chlorotoluene                       | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Dibromochloromethane                  | ND            | ---                  | 1.00            | ug/L             | 1                     | 03/30/23 00:45 | EPA 8260D   |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                           | Sample Result | Detection Limit      | Reporting Limit | Units | Dilution              | Date Analyzed  | Method Ref. | Notes |
|-----------------------------------|---------------|----------------------|-----------------|-------|-----------------------|----------------|-------------|-------|
| <b>MW18-20230324 (A3C0961-04)</b> |               | <b>Matrix: Water</b> |                 |       | <b>Batch: 23C1174</b> |                |             |       |
| 1,2-Dibromo-3-chloropropane       | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)           | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Dibromomethane                    | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,2-Dichlorobenzene               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,3-Dichlorobenzene               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,4-Dichlorobenzene               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Dichlorodifluoromethane           | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| <b>1,1-Dichloroethane</b>         | <b>0.750</b>  | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)          | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| <b>1,1-Dichloroethene</b>         | <b>1.19</b>   | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| <b>trans-1,2-Dichloroethene</b>   | <b>42.0</b>   | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,2-Dichloropropane               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,3-Dichloropropane               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 2,2-Dichloropropane               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,1-Dichloropropene               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| cis-1,3-Dichloropropene           | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| trans-1,3-Dichloropropene         | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Ethylbenzene                      | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Hexachlorobutadiene               | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 2-Hexanone                        | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Isopropylbenzene                  | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 4-Isopropyltoluene                | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Methylene chloride                | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MiBK)       | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE)    | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Naphthalene                       | ND            | ---                  | 2.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| n-Propylbenzene                   | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Styrene                           | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane         | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane         | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Tetrachloroethene (PCE)           | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| Toluene                           | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene            | ND            | ---                  | 2.00            | ug/L  | 1                     | 03/30/23 00:45 | EPA 8260D   |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3C0961 - 04 08 23 2122**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Sample Result | Detection Limit      | Reporting Limit | Units          | Dilution              | Date Analyzed  | Method Ref.           | Notes            |
|----------------------------------------------|---------------|----------------------|-----------------|----------------|-----------------------|----------------|-----------------------|------------------|
| <b>MW18-20230324 (A3C0961-04)</b>            |               | <b>Matrix: Water</b> |                 |                | <b>Batch: 23C1174</b> |                |                       |                  |
| 1,2,4-Trichlorobenzene                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| 1,1,1-Trichloroethane                        | ND            | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| 1,1,2-Trichloroethane                        | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| Trichlorofluoromethane                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| 1,2,3-Trichloropropane                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| 1,2,4-Trimethylbenzene                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| 1,3,5-Trimethylbenzene                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| <b>Vinyl chloride</b>                        | <b>72.8</b>   | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| m,p-Xylene                                   | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| o-Xylene                                     | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 00:45 | EPA 8260D             |                  |
| <i>Surrogate: 1,4-Difluorobenzene (Surr)</i> |               | <i>Recovery:</i>     | <i>103 %</i>    | <i>Limits:</i> | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 00:45</i> | <i>EPA 8260D</i> |
| <i>Toluene-d8 (Surr)</i>                     |               |                      | <i>101 %</i>    |                | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 00:45</i> | <i>EPA 8260D</i> |
| <i>4-Bromofluorobenzene (Surr)</i>           |               |                      | <i>99 %</i>     |                | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 00:45</i> | <i>EPA 8260D</i> |
| <b>MW18-20230324 (A3C0961-04RE1)</b>         |               | <b>Matrix: Water</b> |                 |                | <b>Batch: 23C1207</b> |                |                       |                  |
| <b>cis-1,2-Dichloroethene</b>                | <b>575</b>    | ---                  | 8.00            | ug/L           | 20                    | 03/30/23 17:08 | EPA 8260D             |                  |
| <b>Trichloroethene (TCE)</b>                 | <b>313</b>    | ---                  | 8.00            | ug/L           | 20                    | 03/30/23 17:08 | EPA 8260D             |                  |
| <i>Surrogate: 1,4-Difluorobenzene (Surr)</i> |               | <i>Recovery:</i>     | <i>97 %</i>     | <i>Limits:</i> | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 17:08</i> | <i>EPA 8260D</i> |
| <i>Toluene-d8 (Surr)</i>                     |               |                      | <i>103 %</i>    |                | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 17:08</i> | <i>EPA 8260D</i> |
| <i>4-Bromofluorobenzene (Surr)</i>           |               |                      | <i>99 %</i>     |                | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 17:08</i> | <i>EPA 8260D</i> |
| <b>MW19-20230324 (A3C0961-05)</b>            |               | <b>Matrix: Water</b> |                 |                | <b>Batch: 23C1174</b> |                |                       |                  |
| Acetone                                      | ND            | ---                  | 20.0            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Acrylonitrile                                | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Benzene                                      | ND            | ---                  | 0.200           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Bromobenzene                                 | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Bromochloromethane                           | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Bromodichloromethane                         | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Bromoform                                    | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Bromomethane                                 | ND            | ---                  | 5.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 2-Butanone (MEK)                             | ND            | ---                  | 10.0            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| n-Butylbenzene                               | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| sec-Butylbenzene                             | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| tert-Butylbenzene                            | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3C0961 - 04 08 23 2122**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                           | Sample Result | Detection Limit      | Reporting Limit | Units | Dilution              | Date Analyzed  | Method Ref. | Notes |
|-----------------------------------|---------------|----------------------|-----------------|-------|-----------------------|----------------|-------------|-------|
| <b>MW19-20230324 (A3C0961-05)</b> |               | <b>Matrix: Water</b> |                 |       | <b>Batch: 23C1174</b> |                |             |       |
| Carbon disulfide                  | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Carbon tetrachloride              | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Chlorobenzene                     | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Chloroethane                      | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Chloroform                        | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Chloromethane                     | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 2-Chlorotoluene                   | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 4-Chlorotoluene                   | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Dibromochloromethane              | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane       | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)           | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Dibromomethane                    | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,2-Dichlorobenzene               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,3-Dichlorobenzene               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,4-Dichlorobenzene               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Dichlorodifluoromethane           | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,1-Dichloroethane                | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)          | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,1-Dichloroethene                | ND            | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| <b>cis-1,2-Dichloroethene</b>     | <b>24.5</b>   | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| <b>trans-1,2-Dichloroethene</b>   | <b>1.49</b>   | ---                  | 0.400           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,2-Dichloropropane               | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,3-Dichloropropane               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 2,2-Dichloropropane               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 1,1-Dichloropropene               | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| cis-1,3-Dichloropropene           | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| trans-1,3-Dichloropropene         | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Ethylbenzene                      | ND            | ---                  | 0.500           | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Hexachlorobutadiene               | ND            | ---                  | 5.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 2-Hexanone                        | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Isopropylbenzene                  | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| 4-Isopropyltoluene                | ND            | ---                  | 1.00            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |
| Methylene chloride                | ND            | ---                  | 10.0            | ug/L  | 1                     | 03/30/23 01:07 | EPA 8260D   |       |

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Philip Nerenberg, Lab Director



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15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3C0961 - 04 08 23 2122**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Sample Result | Detection Limit      | Reporting Limit | Units          | Dilution              | Date Analyzed  | Method Ref.           | Notes            |
|----------------------------------------------|---------------|----------------------|-----------------|----------------|-----------------------|----------------|-----------------------|------------------|
| <b>MW19-20230324 (A3C0961-05)</b>            |               | <b>Matrix: Water</b> |                 |                | <b>Batch: 23C1174</b> |                |                       |                  |
| 4-Methyl-2-pentanone (MiBK)                  | ND            | ---                  | 10.0            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Methyl tert-butyl ether (MTBE)               | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Naphthalene                                  | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| n-Propylbenzene                              | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Styrene                                      | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,1,1,2-Tetrachloroethane                    | ND            | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,1,2,2-Tetrachloroethane                    | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| <b>Tetrachloroethene (PCE)</b>               | <b>2.22</b>   | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Toluene                                      | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,2,3-Trichlorobenzene                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,2,4-Trichlorobenzene                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,1,1-Trichloroethane                        | ND            | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,1,2-Trichloroethane                        | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| <b>Trichloroethene (TCE)</b>                 | <b>131</b>    | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| Trichlorofluoromethane                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,2,3-Trichloropropane                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,2,4-Trimethylbenzene                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| 1,3,5-Trimethylbenzene                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| <b>Vinyl chloride</b>                        | <b>0.690</b>  | ---                  | 0.400           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| m,p-Xylene                                   | ND            | ---                  | 1.00            | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| o-Xylene                                     | ND            | ---                  | 0.500           | ug/L           | 1                     | 03/30/23 01:07 | EPA 8260D             |                  |
| <i>Surrogate: 1,4-Difluorobenzene (Surr)</i> |               | <i>Recovery:</i>     | <i>106 %</i>    | <i>Limits:</i> | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 01:07</i> | <i>EPA 8260D</i> |
| <i>Toluene-d8 (Surr)</i>                     |               |                      | <i>103 %</i>    |                | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 01:07</i> | <i>EPA 8260D</i> |
| <i>4-Bromofluorobenzene (Surr)</i>           |               |                      | <i>100 %</i>    |                | <i>80-120 %</i>       | <i>1</i>       | <i>03/30/23 01:07</i> | <i>EPA 8260D</i> |

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 461M114811  
Project Manager: Russ Bunker

Report ID:  
A3C0961 - 04 08 23 2122

ANALYTICAL SAMPLE RESULTS

Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                    | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|----------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| RW1-20230324 (A3C0961-01)  |               |                 |                 | Matrix: Water |          | Batch: 23D0067 |             |       |
| Total Organic Carbon       | 1.56          | ---             | 1.00            | mg/L          | 1        | 04/04/23 04:44 | SM 5310 C   |       |
| MW16-20230324 (A3C0961-02) |               |                 |                 | Matrix: Water |          | Batch: 23D0067 |             |       |
| Total Organic Carbon       | 2.20          | ---             | 1.00            | mg/L          | 1        | 04/04/23 05:14 | SM 5310 C   |       |
| MW17-20230324 (A3C0961-03) |               |                 |                 | Matrix: Water |          | Batch: 23D0067 |             |       |
| Total Organic Carbon       | 1.51          | ---             | 1.00            | mg/L          | 1        | 04/04/23 05:44 | SM 5310 C   |       |
| MW18-20230324 (A3C0961-04) |               |                 |                 | Matrix: Water |          | Batch: 23D0067 |             |       |
| Total Organic Carbon       | 1.93          | ---             | 1.00            | mg/L          | 1        | 04/04/23 06:14 | SM 5310 C   |       |
| MW19-20230324 (A3C0961-05) |               |                 |                 | Matrix: Water |          | Batch: 23D0067 |             |       |
| Total Organic Carbon       | 1.40          | ---             | 1.00            | mg/L          | 1        | 04/04/23 06:44 | SM 5310 C   |       |

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## ANALYTICAL REPORT

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23C1174-BLK1)        |        |                 | Prepared: 03/29/23 13:58 |       | Analyzed: 03/29/23 20:37 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                                                       | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------------------------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C                                                     |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| Blank (23C1174-BLK1)                                                          |        |                 |                 |       |          | Prepared: 03/29/23 13:58 Analyzed: 03/29/23 20:37 |               |       |              |     |           |       |
| 1,2-Dichloropropane                                                           | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane                                                           | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane                                                           | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene                                                           | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene                                                       | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene                                                     | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                                                                  | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene                                                           | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                                                                    | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                                                              | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride                                                            | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)                                                   | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)                                                | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                                                                   | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                                                               | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Styrene                                                                       | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane                                                     | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane                                                     | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)                                                       | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Toluene                                                                       | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene                                                        | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene                                                        | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane                                                         | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane                                                         | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)                                                         | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane                                                        | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                                                                | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                                                                    | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                                                                      | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) Recovery: 97 % Limits: 80-120 % Dilution: 1x |        |                 |                 |       |          |                                                   |               |       |              |     |           |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23C1174-BLK1)        |        |                 | Prepared: 03/29/23 13:58 |                  | Analyzed: 03/29/23 20:37 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23C1174-BS1)           |        |                 | Prepared: 03/29/23 13:58 |                  | Analyzed: 03/29/23 19:53 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 43.0   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Acrylonitrile               | 21.8   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Benzene                     | 20.3   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 19.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 24.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 121   | 80-120%      | --- | ---       | Q-56  |
| Bromodichloromethane        | 22.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Bromoform                   | 22.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| Bromomethane                | 26.6   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 133   | 80-120%      | --- | ---       | Q-56  |
| 2-Butanone (MEK)            | 46.6   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 117   | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 22.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 23.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 118   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 22.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 22.0   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 24.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 120   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 20.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Chloroethane                | 28.0   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 140   | 80-120%      | --- | ---       | Q-56  |
| Chloroform                  | 20.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Chloromethane               | 25.4   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 127   | 80-120%      | --- | ---       | Q-56  |
| 2-Chlorotoluene             | 20.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 21.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 19.1   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 21.1   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Dibromomethane              | 20.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 20.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 20.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 19.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 29.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 149   | 80-120%      | --- | ---       | Q-56  |
| 1,1-Dichloroethane          | 21.7   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| LCS (23C1174-BS1)              |        |                 | Prepared: 03/29/23 13:58 |       | Analyzed: 03/29/23 19:53 |              |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 23.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 117   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 23.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 21.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 21.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 19.9   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 21.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 24.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 123   | 80-120%      | --- | ---       | Q-56  |
| 1,1-Dichloropropene            | 22.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 22.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 25.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 126   | 80-120%      | --- | ---       | Q-56  |
| Ethylbenzene                   | 22.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 20.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 45.4   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 23.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 23.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| Methylene chloride             | 20.2   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 51.7   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 129   | 80-120%      | --- | ---       | Q-56  |
| Methyl tert-butyl ether (MTBE) | 20.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 16.2   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 81    | 80-120%      | --- | ---       |       |
| n-Propylbenzene                | 21.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Styrene                        | 23.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 20.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 21.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 21.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Toluene                        | 20.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 20.6   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 18.8   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 22.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 21.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 18.7   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 25.7   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 128   | 80-120%      | --- | ---       | Q-56  |
| 1,2,3-Trichloropropane         | 21.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 23.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 23.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23C1174-BS1)                |        |                 | Prepared: 03/29/23 13:58 |                  | Analyzed: 03/29/23 19:53 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 23.5   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 117   | 80-120%      | --- | ---       | Q-56  |
| m,p-Xylene                       | 48.2   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 121   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 22.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 93 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23C1174-DUP1)

Prepared: 03/29/23 13:58 Analyzed: 03/30/23 04:52

QC Source Sample: MW16-20230324 (A3C0961-02)

## EPA 8260D

|                             |    |     |      |      |    |     |    |     |     |     |     |
|-----------------------------|----|-----|------|------|----|-----|----|-----|-----|-----|-----|
| Acetone                     | ND | --- | 200  | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Acrylonitrile               | ND | --- | 20.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Benzene                     | ND | --- | 2.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromobenzene                | ND | --- | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromochloromethane          | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromoform                   | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromomethane                | ND | --- | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | --- | 100  | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Carbon disulfide            | ND | --- | 100  | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chlorobenzene               | ND | --- | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chloroethane                | ND | --- | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chloroform                  | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chloromethane               | ND | --- | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | --- | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | --- | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Dibromomethane              | ND | --- | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C                    |        |                 |                                                      |       |          | Water        |               |       |              |     |           |       |
| Duplicate (23C1174-DUP1)                     |        |                 | Prepared: 03/29/23 13:58    Analyzed: 03/30/23 04:52 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: MW16-20230324 (A3C0961-02) |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| 1,2-Dichlorobenzene                          | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                          | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                          | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                      | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                           | ND     | ---             | 4.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)                     | ND     | ---             | 4.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                           | ND     | ---             | 4.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                       | 123    | ---             | 4.00                                                 | ug/L  | 10       | ---          | 130           | ---   | ---          | 5   | 30%       |       |
| trans-1,2-Dichloroethene                     | 10.0   | ---             | 4.00                                                 | ug/L  | 10       | ---          | 10.8          | ---   | ---          | 8   | 30%       |       |
| 1,2-Dichloropropane                          | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                          | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                          | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                          | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                      | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene                    | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                                 | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                          | ND     | ---             | 50.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                                   | ND     | ---             | 100                                                  | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                             | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                           | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                           | ND     | ---             | 100                                                  | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)                  | ND     | ---             | 100                                                  | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)               | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                                  | ND     | ---             | 20.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                              | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                      | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane                    | ND     | ---             | 4.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane                    | ND     | ---             | 5.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                      | ND     | ---             | 4.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                      | ND     | ---             | 10.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                       | ND     | ---             | 20.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                       | ND     | ---             | 20.0                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                        | ND     | ---             | 4.00                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Philip Nerenberg, Lab Director

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Result | Detection Limit | Reporting Limit                                     | Units            | Dilution | Spike Amount                                        | Source Result | % REC | Limits  | RPD | RPD Limit | Notes |
|----------------------------------------------|--------|-----------------|-----------------------------------------------------|------------------|----------|-----------------------------------------------------|---------------|-------|---------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C                    |        |                 |                                                     |                  |          | Water                                               |               |       |         |     |           |       |
| Duplicate (23C1174-DUP1)                     |        |                 | Prepared: 03/29/23 13:58   Analyzed: 03/30/23 04:52 |                  |          |                                                     |               |       |         |     |           |       |
| QC Source Sample: MW16-20230324 (A3C0961-02) |        |                 |                                                     |                  |          |                                                     |               |       |         |     |           |       |
| 1,1,2-Trichloroethane                        | ND     | ---             | 5.00                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| Trichloroethene (TCE)                        | 82.1   | ---             | 4.00                                                | ug/L             | 10       | ---                                                 | 86.0          | ---   | ---     | 5   | 30%       |       |
| Trichlorofluoromethane                       | ND     | ---             | 20.0                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| 1,2,3-Trichloropropane                       | ND     | ---             | 10.0                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                       | ND     | ---             | 10.0                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                       | ND     | ---             | 10.0                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| Vinyl chloride                               | 10.9   | ---             | 4.00                                                | ug/L             | 10       | ---                                                 | 11.7          | ---   | ---     | 7   | 30%       |       |
| m,p-Xylene                                   | ND     | ---             | 10.0                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| o-Xylene                                     | ND     | ---             | 5.00                                                | ug/L             | 10       | ---                                                 | ND            | ---   | ---     | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)             |        | Recovery: 102 % |                                                     | Limits: 80-120 % |          | Dilution: 1x                                        |               |       |         |     |           |       |
| Toluene-d8 (Surr)                            |        | 103 %           |                                                     | 80-120 %         |          | "                                                   |               |       |         |     |           |       |
| 4-Bromofluorobenzene (Surr)                  |        | 97 %            |                                                     | 80-120 %         |          | "                                                   |               |       |         |     |           |       |
| Matrix Spike (23C1174-MS1)                   |        |                 |                                                     |                  |          | Prepared: 03/29/23 13:58   Analyzed: 03/30/23 02:15 |               |       |         |     |           |       |
| QC Source Sample: Non-SDG (A3C1021-02)       |        |                 |                                                     |                  |          |                                                     |               |       |         |     |           |       |
| EPA 8260D                                    |        |                 |                                                     |                  |          |                                                     |               |       |         |     |           |       |
| Acetone                                      | 50.0   | ---             | 20.0                                                | ug/L             | 1        | 40.0                                                | ND            | 125   | 39-160% | --- | ---       |       |
| Acrylonitrile                                | 20.3   | ---             | 2.00                                                | ug/L             | 1        | 20.0                                                | ND            | 101   | 63-135% | --- | ---       |       |
| Benzene                                      | 20.7   | ---             | 0.200                                               | ug/L             | 1        | 20.0                                                | ND            | 103   | 79-120% | --- | ---       |       |
| Bromobenzene                                 | 18.8   | ---             | 0.500                                               | ug/L             | 1        | 20.0                                                | ND            | 94    | 80-120% | --- | ---       |       |
| Bromochloromethane                           | 24.3   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 122   | 78-123% | --- | ---       | Q-54  |
| Bromodichloromethane                         | 22.7   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 113   | 79-125% | --- | ---       |       |
| Bromoform                                    | 22.5   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 112   | 66-130% | --- | ---       |       |
| Bromomethane                                 | 27.8   | ---             | 5.00                                                | ug/L             | 1        | 20.0                                                | ND            | 139   | 53-141% | --- | ---       | Q-54b |
| 2-Butanone (MEK)                             | 37.5   | ---             | 10.0                                                | ug/L             | 1        | 40.0                                                | ND            | 94    | 56-143% | --- | ---       |       |
| n-Butylbenzene                               | 21.6   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 108   | 75-128% | --- | ---       |       |
| sec-Butylbenzene                             | 23.9   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 120   | 77-126% | --- | ---       |       |
| tert-Butylbenzene                            | 22.9   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 115   | 78-124% | --- | ---       |       |
| Carbon disulfide                             | 23.0   | ---             | 10.0                                                | ug/L             | 1        | 20.0                                                | ND            | 115   | 64-133% | --- | ---       |       |
| Carbon tetrachloride                         | 25.9   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 130   | 72-136% | --- | ---       |       |
| Chlorobenzene                                | 21.0   | ---             | 0.500                                               | ug/L             | 1        | 20.0                                                | ND            | 105   | 80-120% | --- | ---       |       |
| Chloroethane                                 | 29.4   | ---             | 5.00                                                | ug/L             | 1        | 20.0                                                | ND            | 147   | 60-138% | --- | ---       | Q-54c |
| Chloroform                                   | 21.2   | ---             | 1.00                                                | ug/L             | 1        | 20.0                                                | ND            | 106   | 79-124% | --- | ---       |       |

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Project Manager: Russ Bunker

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A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23C1174-MS1)             |        |                 | Prepared: 03/29/23 13:58 |       | Analyzed: 03/30/23 02:15 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1021-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Chloromethane                          | 26.1   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 131   | 50-139%      | --- | ---       | Q-54k |
| 2-Chlorotoluene                        | 20.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 101   | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 19.2   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 96    | 62-128%      | --- | ---       | Q-54f |
| 1,2-Dibromoethane (EDB)                | 20.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 103   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 20.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 19.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 99    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 20.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 103   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 19.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 97    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 31.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 158   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 22.4   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 112   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 23.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 119   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 23.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 118   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 20.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 103   | 78-123%      | --- | ---       | Q-54g |
| trans-1,2-Dichloroethene               | 21.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 108   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 20.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 101   | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 60-139%      | --- | ---       | Q-54j |
| 1,1-Dichloropropene                    | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 112   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 21.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 108   | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 24.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 120   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 22.5   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 113   | 79-121%      | --- | ---       | Q-54m |
| Hexachlorobutadiene                    | 21.3   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 106   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 31.4   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 79    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 23.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 116   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 23.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 115   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 19.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 98    | 74-124%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)            | 47.0   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 118   | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 20.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 103   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 14.9   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 75    | 61-128%      | --- | ---       |       |
| n-Propylbenzene                        | 21.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 108   | 76-126%      | --- | ---       |       |
| Styrene                                | 23.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 116   | 78-123%      | --- | ---       |       |

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Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1174 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23C1174-MS1)             |        |                 | Prepared: 03/29/23 13:58 |                  | Analyzed: 03/30/23 02:15 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1021-02) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,1,1,2-Tetrachloroethane              | 21.1   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 106   | 78-124%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane              | 20.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 103   | 71-121%      | --- | ---       |       |
| Tetrachloroethene (PCE)                | 22.6   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 113   | 74-129%      | --- | ---       |       |
| Toluene                                | 20.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 103   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 20.4   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 102   | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 18.2   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 91    | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 23.9   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 119   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 20.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 103   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 19.4   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 97    | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 27.5   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 138   | 65-141%      | --- | ---       | Q-54I |
| 1,2,3-Trichloropropane                 | 21.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 105   | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 23.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 116   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 23.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 116   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 24.0   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 120   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 48.9   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ND            | 122   | 80-121%      | --- | ---       | Q-54  |
| o-Xylene                               | 22.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 110   | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 94 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 92 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **461M114811**Project Manager: **Russ Bunker****Report ID:****A3C0961 - 04 08 23 2122****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23C1207-BLK1)        |        |                 | Prepared: 03/30/23 10:00 |       | Analyzed: 03/30/23 11:35 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23C1207-BLK1)             |        |                 | Prepared: 03/30/23 10:00 |                  | Analyzed: 03/30/23 11:35 |              |               |       |              |     |           |       |
| 1,2-Dichloropropane              | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene        | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                     | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene              | ND     | ---             | 5.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                       | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                 | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene               | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride               | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)      | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)   | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                      | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                  | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Styrene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane        | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane        | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)          | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Toluene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane            | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                   | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                       | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                         | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 99 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23C1207-BLK1)        |        |                 | Prepared: 03/30/23 10:00 |                  | Analyzed: 03/30/23 11:35 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 103 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 98 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23C1207-BS1)           |        |                 | Prepared: 03/30/23 10:00 |                  | Analyzed: 03/30/23 10:37 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 40.1   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Acrylonitrile               | 20.2   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Benzene                     | 20.1   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 18.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 23.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 118   | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 22.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| Bromoform                   | 22.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| Bromomethane                | 26.8   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 134   | 80-120%      | --- | ---       | Q-56  |
| 2-Butanone (MEK)            | 43.9   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 21.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 22.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 21.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 22.2   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 25.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 127   | 80-120%      | --- | ---       | Q-56  |
| Chlorobenzene               | 20.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Chloroethane                | 27.3   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 137   | 80-120%      | --- | ---       | Q-56  |
| Chloroform                  | 21.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Chloromethane               | 24.9   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 124   | 80-120%      | --- | ---       | Q-56  |
| 2-Chlorotoluene             | 19.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 20.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 21.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 18.3   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 20.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| Dibromomethane              | 20.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 19.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 20.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 18.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 30.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 154   | 80-120%      | --- | ---       | Q-56  |
| 1,1-Dichloroethane          | 21.6   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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Report ID:

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| LCS (23C1207-BS1)              |        |                 | Prepared: 03/30/23 10:00 |       | Analyzed: 03/30/23 10:37 |              |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 23.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 119   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 22.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 20.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 20.1   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 19.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 20.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 25.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 128   | 80-120%      | --- | ---       | Q-56  |
| 1,1-Dichloropropene            | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 21.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 24.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 121   | 80-120%      | --- | ---       | Q-56  |
| Ethylbenzene                   | 21.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 20.1   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 41.2   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 21.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Methylene chloride             | 20.0   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 46.4   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 20.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 14.2   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 71    | 80-120%      | --- | ---       | Q-55  |
| n-Propylbenzene                | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Styrene                        | 22.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 20.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 20.9   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 21.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Toluene                        | 19.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 19.4   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 17.4   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 87    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 23.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 18.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 26.3   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 132   | 80-120%      | --- | ---       | Q-56  |
| 1,2,3-Trichloropropane         | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount             | Source Result | % REC                    | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------------------|---------------|--------------------------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C              |        |                 |                          |                  |                          | Water                    |               |                          |              |     |           |       |
| LCS (23C1207-BS1)                      |        |                 | Prepared: 03/30/23 10:00 |                  | Analyzed: 03/30/23 10:37 |                          |               |                          |              |     |           |       |
| Vinyl chloride                         | 22.6   | ---             | 0.400                    | ug/L             | 1                        | 20.0                     | ---           | 113                      | 80-120%      | --- | ---       |       |
| m,p-Xylene                             | 46.6   | ---             | 1.00                     | ug/L             | 1                        | 40.0                     | ---           | 117                      | 80-120%      | --- | ---       |       |
| o-Xylene                               | 20.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0                     | ---           | 105                      | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 95 %  |                          | Limits: 80-120 % |                          | Dilution: 1x             |               |                          |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 99 %            |                          | 80-120 %         |                          | "                        |               |                          |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 91 %            |                          | 80-120 %         |                          | "                        |               |                          |              |     |           |       |
| Duplicate (23C1207-DUP1)               |        |                 |                          |                  |                          | Prepared: 03/30/23 11:50 |               | Analyzed: 03/30/23 18:15 |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1058-05) |        |                 |                          |                  |                          |                          |               |                          |              |     |           |       |
| Acetone                                | ND     | ---             | 200                      | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       | R-02  |
| Acrylonitrile                          | ND     | ---             | 10.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Benzene                                | 175    | ---             | 1.00                     | ug/L             | 5                        | ---                      | 175           | ---                      | ---          | 0.2 | 30%       |       |
| Bromobenzene                           | ND     | ---             | 2.50                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromochloromethane                     | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromodichloromethane                   | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromoform                              | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromomethane                           | ND     | ---             | 25.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 2-Butanone (MEK)                       | ND     | ---             | 50.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| n-Butylbenzene                         | 21.3   | ---             | 5.00                     | ug/L             | 5                        | ---                      | 20.7          | ---                      | ---          | 3   | 30%       |       |
| sec-Butylbenzene                       | 9.80   | ---             | 5.00                     | ug/L             | 5                        | ---                      | 9.10          | ---                      | ---          | 7   | 30%       |       |
| tert-Butylbenzene                      | 5.60   | ---             | 5.00                     | ug/L             | 5                        | ---                      | 4.95          | ---                      | ---          | 12  | 30%       |       |
| Carbon disulfide                       | ND     | ---             | 50.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Carbon tetrachloride                   | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chlorobenzene                          | ND     | ---             | 2.50                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chloroethane                           | ND     | ---             | 25.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chloroform                             | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chloromethane                          | ND     | ---             | 25.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 2-Chlorotoluene                        | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 4-Chlorotoluene                        | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Dibromochloromethane                   | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane            | ND     | ---             | 25.0                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                | ND     | ---             | 2.50                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Dibromomethane                         | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                    | ND     | ---             | 2.50                     | ug/L             | 5                        | ---                      | ND            | ---                      | ---          | --- | 30%       |       |

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23C1207-DUP1)               |        |                 | Prepared: 03/30/23 11:50 |       | Analyzed: 03/30/23 18:15 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1058-05) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | 90.8   | ---             | 2.50                     | ug/L  | 5                        | ---          | 90.8          | ---   | ---          | 0   | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 25.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | 43.2   | ---             | 5.00                     | ug/L  | 5                        | ---          | 42.0          | ---   | ---          | 3   | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | 208    | ---             | 10.0                     | ug/L  | 5                        | ---          | 197           | ---   | ---          | 5   | 30%       | Q-54o |
| n-Propylbenzene                        | 146    | ---             | 2.50                     | ug/L  | 5                        | ---          | 144           | ---   | ---          | 0.8 | 30%       |       |
| Styrene                                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | ND     | ---             | 10.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       | R-06  |
| Toluene                                | 53.4   | ---             | 5.00                     | ug/L  | 5                        | ---          | 53.6          | ---   | ---          | 0.5 | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 10.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 10.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Philip Nerenberg, Lab Director

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Project: **OCS**Project Number: **461M114811**Project Manager: **Russ Bunker****Report ID:****A3C0961 - 04 08 23 2122**

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C              |        |                 |                          |                  |                          | Water                                             |               |       |              |     |           |       |
| Duplicate (23C1207-DUP1)               |        |                 | Prepared: 03/30/23 11:50 |                  | Analyzed: 03/30/23 18:15 |                                                   |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1058-05) |        |                 |                          |                  |                          |                                                   |               |       |              |     |           |       |
| Trichloroethene (TCE)                  | ND     | ---             | 2.00                     | ug/L             | 5                        | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 10.0                     | ug/L             | 5                        | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 5.00                     | ug/L             | 5                        | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | 31.8   | ---             | 5.00                     | ug/L             | 5                        | ---                                               | 30.5          | ---   | ---          | 4   | 30%       |       |
| 1,3,5-Trimethylbenzene                 | 10.4   | ---             | 5.00                     | ug/L             | 5                        | ---                                               | 9.85          | ---   | ---          | 5   | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 2.00                     | ug/L             | 5                        | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | 122    | ---             | 5.00                     | ug/L             | 5                        | ---                                               | 122           | ---   | ---          | 0   | 30%       |       |
| o-Xylene                               | 29.4   | ---             | 2.50                     | ug/L             | 5                        | ---                                               | 28.4          | ---   | ---          | 3   | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 95 %  |                          | Limits: 80-120 % |                          | Dilution: 1x                                      |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 102 %           |                          | 80-120 %         |                          | "                                                 |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 98 %            |                          | 80-120 %         |                          | "                                                 |               |       |              |     |           |       |
| Matrix Spike (23C1207-MS1)             |        |                 |                          |                  |                          | Prepared: 03/30/23 11:50 Analyzed: 03/30/23 19:44 |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C0853-01) |        |                 |                          |                  |                          |                                                   |               |       |              |     |           |       |
| EPA 8260D                              |        |                 |                          |                  |                          |                                                   |               |       |              |     |           |       |
| Acetone                                | 459    | ---             | 200                      | ug/L             | 10                       | 400                                               | ND            | 115   | 39-160%      | --- | ---       |       |
| Acrylonitrile                          | 221    | ---             | 20.0                     | ug/L             | 10                       | 200                                               | ND            | 111   | 63-135%      | --- | ---       |       |
| Benzene                                | 215    | ---             | 2.00                     | ug/L             | 10                       | 200                                               | ND            | 107   | 79-120%      | --- | ---       |       |
| Bromobenzene                           | 202    | ---             | 5.00                     | ug/L             | 10                       | 200                                               | ND            | 101   | 80-120%      | --- | ---       |       |
| Bromochloromethane                     | 253    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 126   | 78-123%      | --- | ---       | Q-01  |
| Bromodichloromethane                   | 230    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 115   | 79-125%      | --- | ---       |       |
| Bromoform                              | 224    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 112   | 66-130%      | --- | ---       |       |
| Bromomethane                           | 265    | ---             | 50.0                     | ug/L             | 10                       | 200                                               | ND            | 133   | 53-141%      | --- | ---       | Q-54c |
| 2-Butanone (MEK)                       | 486    | ---             | 100                      | ug/L             | 10                       | 400                                               | ND            | 122   | 56-143%      | --- | ---       |       |
| n-Butylbenzene                         | 249    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 125   | 75-128%      | --- | ---       |       |
| sec-Butylbenzene                       | 258    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 129   | 77-126%      | --- | ---       | Q-01  |
| tert-Butylbenzene                      | 249    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 125   | 78-124%      | --- | ---       | Q-01  |
| Carbon disulfide                       | 231    | ---             | 100                      | ug/L             | 10                       | 200                                               | ND            | 115   | 64-133%      | --- | ---       |       |
| Carbon tetrachloride                   | 262    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 131   | 72-136%      | --- | ---       | Q-54k |
| Chlorobenzene                          | 215    | ---             | 5.00                     | ug/L             | 10                       | 200                                               | ND            | 108   | 80-120%      | --- | ---       |       |
| Chloroethane                           | 262    | ---             | 50.0                     | ug/L             | 10                       | 200                                               | ND            | 131   | 60-138%      | --- | ---       | Q-54d |
| Chloroform                             | 217    | ---             | 10.0                     | ug/L             | 10                       | 200                                               | ND            | 108   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 270    | ---             | 50.0                     | ug/L             | 10                       | 200                                               | ND            | 135   | 50-139%      | --- | ---       | Q-54i |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C              |        |                 |                                                     |       |          | Water        |               |       |              |     |           |       |
| Matrix Spike (23C1207-MS1)             |        |                 | Prepared: 03/30/23 11:50   Analyzed: 03/30/23 19:44 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C0853-01) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| 2-Chlorotoluene                        | 218    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 109   | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 231    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 115   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 226    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 113   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 200    | ---             | 50.0                                                | ug/L  | 10       | 200          | ND            | 100   | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 216    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 108   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 214    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 107   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 212    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 106   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 218    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 109   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 200    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 100   | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 321    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 160   | 32-152%      | --- | ---       | Q-54h |
| 1,1-Dichloroethane                     | 229    | ---             | 4.00                                                | ug/L  | 10       | 200          | ND            | 114   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 241    | ---             | 4.00                                                | ug/L  | 10       | 200          | ND            | 121   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 253    | ---             | 4.00                                                | ug/L  | 10       | 200          | ND            | 126   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 228    | ---             | 4.00                                                | ug/L  | 10       | 200          | ND            | 114   | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 230    | ---             | 4.00                                                | ug/L  | 10       | 200          | ND            | 115   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 209    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 105   | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 225    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 113   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 244    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 122   | 60-139%      | --- | ---       | Q-54l |
| 1,1-Dichloropropene                    | 245    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 122   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 215    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 107   | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 256    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 128   | 73-127%      | --- | ---       | Q-54  |
| Ethylbenzene                           | 231    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 116   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 237    | ---             | 50.0                                                | ug/L  | 10       | 200          | ND            | 119   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 478    | ---             | 100                                                 | ug/L  | 10       | 400          | ND            | 120   | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 248    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 124   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 254    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 127   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 207    | ---             | 100                                                 | ug/L  | 10       | 200          | ND            | 104   | 74-124%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)            | 536    | ---             | 100                                                 | ug/L  | 10       | 400          | ND            | 134   | 67-130%      | --- | ---       | Q-01  |
| Methyl tert-butyl ether (MTBE)         | 219    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 110   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 180    | ---             | 20.0                                                | ug/L  | 10       | 200          | ND            | 90    | 61-128%      | --- | ---       | Q-54o |
| n-Propylbenzene                        | 231    | ---             | 5.00                                                | ug/L  | 10       | 200          | ND            | 116   | 76-126%      | --- | ---       |       |
| Styrene                                | 240    | ---             | 10.0                                                | ug/L  | 10       | 200          | ND            | 120   | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 212    | ---             | 4.00                                                | ug/L  | 10       | 200          | ND            | 106   | 78-124%      | --- | ---       |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23C1207 - EPA 5030C              |        |                 |                                                     |                  |          | Water        |               |       |              |     |           |       |
| Matrix Spike (23C1207-MS1)             |        |                 | Prepared: 03/30/23 11:50   Analyzed: 03/30/23 19:44 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C0853-01) |        |                 |                                                     |                  |          |              |               |       |              |     |           |       |
| 1,1,2,2-Tetrachloroethane              | 218    | ---             | 5.00                                                | ug/L             | 10       | 200          | ND            | 109   | 71-121%      | --- | ---       | Q-54a |
| Tetrachloroethene (PCE)                | 241    | ---             | 4.00                                                | ug/L             | 10       | 200          | 11.9          | 115   | 74-129%      | --- | ---       |       |
| Toluene                                | 212    | ---             | 10.0                                                | ug/L             | 10       | 200          | ND            | 106   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 226    | ---             | 20.0                                                | ug/L             | 10       | 200          | ND            | 113   | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 208    | ---             | 20.0                                                | ug/L             | 10       | 200          | ND            | 104   | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 241    | ---             | 4.00                                                | ug/L             | 10       | 200          | ND            | 120   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 215    | ---             | 5.00                                                | ug/L             | 10       | 200          | ND            | 108   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 202    | ---             | 4.00                                                | ug/L             | 10       | 200          | ND            | 101   | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 271    | ---             | 20.0                                                | ug/L             | 10       | 200          | ND            | 135   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 221    | ---             | 10.0                                                | ug/L             | 10       | 200          | ND            | 110   | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 248    | ---             | 10.0                                                | ug/L             | 10       | 200          | ND            | 124   | 76-124%      | --- | ---       | Q-01  |
| 1,3,5-Trimethylbenzene                 | 247    | ---             | 10.0                                                | ug/L             | 10       | 200          | ND            | 123   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 246    | ---             | 4.00                                                | ug/L             | 10       | 200          | ND            | 123   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 505    | ---             | 10.0                                                | ug/L             | 10       | 400          | ND            | 126   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 240    | ---             | 5.00                                                | ug/L             | 10       | 200          | ND            | 120   | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 94 %  |                                                     | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 98 %            |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 95 %            |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |

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Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23D0057-BLK1)        |        |                 | Prepared: 04/03/23 14:41 |       | Analyzed: 04/04/23 00:27 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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## ANALYTICAL REPORT

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Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23D0057-BLK1)             |        |                 | Prepared: 04/03/23 14:41 |                  | Analyzed: 04/04/23 00:27 |              |               |       |              |     |           |       |
| 1,2-Dichloropropane              | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene        | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                     | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene              | ND     | ---             | 5.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                       | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                 | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene               | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride               | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)      | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)   | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                      | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                  | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Styrene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane        | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane        | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)          | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Toluene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane            | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                   | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                       | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                         | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23D0057-BLK1)        |        |                 | Prepared: 04/03/23 14:41 |                  | Analyzed: 04/04/23 00:27 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 108 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23D0057-BS1)           |        |                 | Prepared: 04/03/23 14:41 |                  | Analyzed: 04/03/23 23:33 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 37.2   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 93    | 80-120%      | --- | ---       | Q-55  |
| Acrylonitrile               | 19.5   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Benzene                     | 19.9   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 19.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 20.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 21.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Bromoform                   | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Bromomethane                | 22.4   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)            | 41.6   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 20.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 20.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 19.5   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 22.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 19.3   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| Chloroethane                | 15.0   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 75    | 80-120%      | --- | ---       |       |
| Chloroform                  | 19.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Chloromethane               | 17.0   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 85    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene             | 19.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 20.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 18.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 18.8   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 19.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Dibromomethane              | 20.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 20.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 19.8   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 19.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 17.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 86    | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane          | 20.4   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| LCS (23D0057-BS1)              |        |                 | Prepared: 04/03/23 14:41 |       | Analyzed: 04/03/23 23:33 |              |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 19.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       | Q-56  |
| 1,1-Dichloroethene             | 19.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 20.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 20.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 20.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 25.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 126   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 20.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 23.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 119   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 20.6   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 42.9   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 21.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 21.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Methylene chloride             | 19.8   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 42.8   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 21.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 17.1   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 86    | 80-120%      | --- | ---       |       |
| n-Propylbenzene                | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Styrene                        | 21.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 18.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 19.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| Toluene                        | 19.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 17.7   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 88    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 19.5   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 22.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 19.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 18.6   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichloropropane         | 19.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 22.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23D0057-BS1)                |        |                 | Prepared: 04/03/23 14:41 |                  | Analyzed: 04/03/23 23:33 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 18.6   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 40.3   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 20.8   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 96 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23D0057-DUP1)

Prepared: 04/03/23 14:41 Analyzed: 04/04/23 05:52

## QC Source Sample: Non-SDG (A3C1025-02)

|                             |    |     |      |      |   |     |    |     |     |     |     |
|-----------------------------|----|-----|------|------|---|-----|----|-----|-----|-----|-----|
| Acetone                     | ND | --- | 100  | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Acrylonitrile               | ND | --- | 10.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Benzene                     | ND | --- | 1.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Bromobenzene                | ND | --- | 2.50 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Bromochloromethane          | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Bromoform                   | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Bromomethane                | ND | --- | 25.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | --- | 50.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Carbon disulfide            | ND | --- | 50.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Chlorobenzene               | ND | --- | 2.50 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Chloroethane                | ND | --- | 25.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Chloroform                  | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Chloromethane               | ND | --- | 25.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | --- | 25.0 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | --- | 2.50 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| Dibromomethane              | ND | --- | 5.00 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND | --- | 2.50 | ug/L | 5 | --- | ND | --- | --- | --- | 30% |

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A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23D0057-DUP1)               |        |                 | Prepared: 04/03/23 14:41 |       | Analyzed: 04/04/23 05:52 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1025-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | 57.5   | ---             | 2.00                     | ug/L  | 5                        | ---          | 59.2          | ---   | ---          | 3   | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 25.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | ---             | 10.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | 3.10   | ---             | 2.00                     | ug/L  | 5                        | ---          | 3.55          | ---   | ---          | 14  | 30%       |       |
| Toluene                                | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 10.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 10.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Duplicate (23D0057-DUP1)               |        |                 | Prepared: 04/03/23 14:41 |                  | Analyzed: 04/04/23 05:52 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1025-02) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Trichloroethene (TCE)                  | 336    | ---             | 2.00                     | ug/L             | 5                        | ---          | 359           | ---   | ---          | 7   | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 10.0                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 2.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                               | ND     | ---             | 2.50                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 104 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 101 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 111 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

Duplicate (23D0057-DUP2) Prepared: 04/03/23 14:41 Analyzed: 04/04/23 09:29

## QC Source Sample: Non-SDG (A3C1150-29)

|                      |    |     |      |      |    |     |    |     |     |     |     |  |
|----------------------|----|-----|------|------|----|-----|----|-----|-----|-----|-----|--|
| Acetone              | ND | --- | 400  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Acrylonitrile        | ND | --- | 40.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Benzene              | ND | --- | 4.00 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Bromobenzene         | ND | --- | 10.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Bromochloromethane   | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Bromodichloromethane | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Bromoform            | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Bromomethane         | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| 2-Butanone (MEK)     | ND | --- | 200  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| n-Butylbenzene       | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| sec-Butylbenzene     | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| tert-Butylbenzene    | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Carbon disulfide     | ND | --- | 200  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Carbon tetrachloride | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Chlorobenzene        | ND | --- | 10.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Chloroethane         | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Chloroform           | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| Chloromethane        | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |
| 2-Chlorotoluene      | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |  |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23D0057-DUP2)               |        |                 | Prepared: 04/03/23 14:41 |       | Analyzed: 04/04/23 09:29 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1150-29) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 4-Chlorotoluene                        | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromochloromethane                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane            | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromomethane                         | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                    | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | ---             | 40.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C              |        |                 |                                                      |                  |          | Water        |               |       |              |     |           |       |
| Duplicate (23D0057-DUP2)               |        |                 | Prepared: 04/03/23 14:41    Analyzed: 04/04/23 09:29 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3C1150-29) |        |                 |                                                      |                  |          |              |               |       |              |     |           |       |
| Tetrachloroethene (PCE)                | ND     | ---             | 8.00                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | ND     | ---             | 20.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 40.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 40.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 8.00                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 10.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichloroethene (TCE)                  | ND     | ---             | 8.00                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 40.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 20.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | ---             | 20.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | ---             | 20.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 8.00                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | ND     | ---             | 20.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                               | ND     | ---             | 10.0                                                 | ug/L             | 20       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 102 % |                                                      | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 101 %           |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 109 %           |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |

## Matrix Spike (23D0057-MS1)

Prepared: 04/03/23 14:41 Analyzed: 04/04/23 07:13

QC Source Sample: Non-SDG (A3D0727-01)

## EPA 8260D

|                      |     |     |      |      |    |     |      |     |         |     |     |
|----------------------|-----|-----|------|------|----|-----|------|-----|---------|-----|-----|
| Acetone              | 421 | --- | 200  | ug/L | 10 | 400 | ND   | 105 | 39-160% | --- | --- |
| Acrylonitrile        | 199 | --- | 20.0 | ug/L | 10 | 200 | ND   | 99  | 63-135% | --- | --- |
| Benzene              | 315 | --- | 2.00 | ug/L | 10 | 200 | 110  | 102 | 79-120% | --- | --- |
| Bromobenzene         | 186 | --- | 5.00 | ug/L | 10 | 200 | ND   | 93  | 80-120% | --- | --- |
| Bromochloromethane   | 215 | --- | 10.0 | ug/L | 10 | 200 | ND   | 107 | 78-123% | --- | --- |
| Bromodichloromethane | 227 | --- | 10.0 | ug/L | 10 | 200 | ND   | 113 | 79-125% | --- | --- |
| Bromoform            | 225 | --- | 10.0 | ug/L | 10 | 200 | ND   | 113 | 66-130% | --- | --- |
| Bromomethane         | 237 | --- | 50.0 | ug/L | 10 | 200 | ND   | 118 | 53-141% | --- | --- |
| 2-Butanone (MEK)     | 426 | --- | 100  | ug/L | 10 | 400 | ND   | 106 | 56-143% | --- | --- |
| n-Butylbenzene       | 218 | --- | 10.0 | ug/L | 10 | 200 | 7.50 | 105 | 75-128% | --- | --- |
| sec-Butylbenzene     | 198 | --- | 10.0 | ug/L | 10 | 200 | 5.60 | 96  | 77-126% | --- | --- |
| tert-Butylbenzene    | 189 | --- | 10.0 | ug/L | 10 | 200 | ND   | 95  | 78-124% | --- | --- |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0057 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23D0057-MS1)             |        |                 | Prepared: 04/03/23 14:41 |       | Analyzed: 04/04/23 07:13 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3D0727-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Carbon disulfide                       | 199    | ---             | 100                      | ug/L  | 10                       | 200          | ND            | 99    | 64-133%      | --- | ---       | Q-54n |
| Carbon tetrachloride                   | 255    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 128   | 72-136%      | --- | ---       |       |
| Chlorobenzene                          | 194    | ---             | 5.00                     | ug/L  | 10                       | 200          | ND            | 97    | 80-120%      | --- | ---       |       |
| Chloroethane                           | 170    | ---             | 50.0                     | ug/L  | 10                       | 200          | ND            | 85    | 60-138%      | --- | ---       |       |
| Chloroform                             | 207    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 104   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 184    | ---             | 50.0                     | ug/L  | 10                       | 200          | ND            | 92    | 50-139%      | --- | ---       | Q-54j |
| 2-Chlorotoluene                        | 189    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 94    | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 190    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 95    | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 198    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 99    | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 194    | ---             | 50.0                     | ug/L  | 10                       | 200          | ND            | 97    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 203    | ---             | 5.00                     | ug/L  | 10                       | 200          | ND            | 101   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 208    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 104   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 200    | ---             | 5.00                     | ug/L  | 10                       | 200          | ND            | 100   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 190    | ---             | 5.00                     | ug/L  | 10                       | 200          | ND            | 95    | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 184    | ---             | 5.00                     | ug/L  | 10                       | 200          | ND            | 92    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 178    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 89    | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 214    | ---             | 4.00                     | ug/L  | 10                       | 200          | ND            | 107   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 203    | ---             | 4.00                     | ug/L  | 10                       | 200          | ND            | 102   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 201    | ---             | 4.00                     | ug/L  | 10                       | 200          | ND            | 101   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 213    | ---             | 4.00                     | ug/L  | 10                       | 200          | ND            | 106   | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 211    | ---             | 4.00                     | ug/L  | 10                       | 200          | ND            | 105   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 206    | ---             | 5.00                     | ug/L  | 10                       | 200          | ND            | 103   | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 200    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 100   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 216    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 108   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 205    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 102   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 232    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 116   | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 225    | ---             | 10.0                     | ug/L  | 10                       | 200          | ND            | 112   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 254    | ---             | 5.00                     | ug/L  | 10                       | 200          | 54.7          | 100   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 188    | ---             | 50.0                     | ug/L  | 10                       | 200          | ND            | 94    | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 430    | ---             | 100                      | ug/L  | 10                       | 400          | ND            | 107   | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 213    | ---             | 10.0                     | ug/L  | 10                       | 200          | 8.30          | 102   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 238    | ---             | 10.0                     | ug/L  | 10                       | 200          | 9.30          | 114   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 203    | ---             | 100                      | ug/L  | 10                       | 200          | ND            | 101   | 74-124%      | --- | ---       |       |

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A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC    | % REC Limits | RPD          | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|----------|--------------|--------------|-----------|-------|
| Batch 23D0057 - EPA 5030C              |        |                 |                                                      |       |          | Water        |               |          |              |              |           |       |
| Matrix Spike (23D0057-MS1)             |        |                 | Prepared: 04/03/23 14:41    Analyzed: 04/04/23 07:13 |       |          |              |               |          |              |              |           |       |
| QC Source Sample: Non-SDG (A3D0727-01) |        |                 |                                                      |       |          |              |               |          |              |              |           |       |
| 4-Methyl-2-pentanone (MiBK)            | 428    | ---             | 100                                                  | ug/L  | 10       | 400          | ND            | 107      | 67-130%      | ---          | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 214    | ---             | 10.0                                                 | ug/L  | 10       | 200          | ND            | 107      | 71-124%      | ---          | ---       |       |
| Naphthalene                            | 374    | ---             | 20.0                                                 | ug/L  | 10       | 200          | 177           | 98       | 61-128%      | ---          | ---       |       |
| n-Propylbenzene                        | 202    | ---             | 5.00                                                 | ug/L  | 10       | 200          | 14.1          | 94       | 76-126%      | ---          | ---       |       |
| Styrene                                | 212    | ---             | 10.0                                                 | ug/L  | 10       | 200          | ND            | 106      | 78-123%      | ---          | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 201    | ---             | 4.00                                                 | ug/L  | 10       | 200          | ND            | 100      | 78-124%      | ---          | ---       |       |
| 1,1,2,2-Tetrachloroethane              | 200    | ---             | 5.00                                                 | ug/L  | 10       | 200          | ND            | 100      | 71-121%      | ---          | ---       |       |
| Tetrachloroethene (PCE)                | 187    | ---             | 4.00                                                 | ug/L  | 10       | 200          | ND            | 94       | 74-129%      | ---          | ---       |       |
| Toluene                                | 652    | ---             | 10.0                                                 | ug/L  | 10       | 200          | 469           | 91       | 80-121%      | ---          | ---       |       |
| 1,2,3-Trichlorobenzene                 | 187    | ---             | 20.0                                                 | ug/L  | 10       | 200          | ND            | 94       | 69-129%      | ---          | ---       |       |
| 1,2,4-Trichlorobenzene                 | 203    | ---             | 20.0                                                 | ug/L  | 10       | 200          | ND            | 102      | 69-130%      | ---          | ---       |       |
| 1,1,1-Trichloroethane                  | 243    | ---             | 4.00                                                 | ug/L  | 10       | 200          | ND            | 121      | 74-131%      | ---          | ---       |       |
| 1,1,2-Trichloroethane                  | 200    | ---             | 5.00                                                 | ug/L  | 10       | 200          | ND            | 100      | 80-120%      | ---          | ---       |       |
| Trichloroethene (TCE)                  | 204    | ---             | 4.00                                                 | ug/L  | 10       | 200          | 5.50          | 99       | 79-123%      | ---          | ---       |       |
| Trichlorofluoromethane                 | 191    | ---             | 20.0                                                 | ug/L  | 10       | 200          | ND            | 95       | 65-141%      | ---          | ---       |       |
| 1,2,3-Trichloropropane                 | 188    | ---             | 10.0                                                 | ug/L  | 10       | 200          | ND            | 94       | 73-122%      | ---          | ---       |       |
| 1,2,4-Trimethylbenzene                 | 414    | ---             | 10.0                                                 | ug/L  | 10       | 200          | 193           | 111      | 76-124%      | ---          | ---       |       |
| 1,3,5-Trimethylbenzene                 | 284    | ---             | 10.0                                                 | ug/L  | 10       | 200          | 75.9          | 104      | 75-124%      | ---          | ---       |       |
| Vinyl chloride                         | 200    | ---             | 4.00                                                 | ug/L  | 10       | 200          | ND            | 100      | 58-137%      | ---          | ---       |       |
| m,p-Xylene                             | 709    | ---             | 10.0                                                 | ug/L  | 10       | 400          | 309           | 100      | 80-121%      | ---          | ---       |       |
| o-Xylene                               | 462    | ---             | 5.00                                                 | ug/L  | 10       | 200          | 250           | 106      | 78-122%      | ---          | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery:       |                                                      | 100 % |          | Limits:      |               | 80-120 % |              | Dilution: 1x |           |       |
| Toluene-d8 (Surr)                      |        |                 |                                                      | 98 %  |          |              |               | 80-120 % |              | "            |           |       |
| 4-Bromofluorobenzene (Surr)            |        |                 |                                                      | 94 %  |          |              |               | 80-120 % |              | "            |           |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: OCS  
Project Number: 461M114811  
Project Manager: Russ BunkerReport ID:  
A3C0961 - 04 08 23 2122

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                                       | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23D0067 - Method Prep: Aq               |        |                 |                                                      |       |          |              | Water         |       |              |     |           |       |
| Blank (23D0067-BLK1)                          |        |                 | Prepared: 04/03/23 15:45    Analyzed: 04/04/23 02:14 |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | ND     | ---             | 1.00                                                 | mg/L  | 1        | ---          | ---           | ---   | ---          | --- | ---       |       |
| LCS (23D0067-BS1)                             |        |                 | Prepared: 04/03/23 15:45    Analyzed: 04/04/23 02:44 |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 10.3   | ---             | 1.00                                                 | mg/L  | 1        | 10.0         | ---           | 103   | 90-114%      | --- | ---       |       |
| Matrix Spike (23D0067-MS1)                    |        |                 | Prepared: 04/03/23 15:45    Analyzed: 04/04/23 03:44 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3C0951-01)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 11.7   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | 1.25          | 105   | 85-115%      | --- | ---       |       |
| Matrix Spike Dup (23D0067-MSD1)               |        |                 | Prepared: 04/03/23 15:45    Analyzed: 04/04/23 04:14 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3C0951-01)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 11.7   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | 1.25          | 104   | 85-115%      | 0.4 | 15%       |       |

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Philip Nerenberg, Lab Director

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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **461M114811**Project Manager: **Russ Bunker****Report ID:****A3C0961 - 04 08 23 2122**

## SAMPLE PREPARATION INFORMATION

## Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23C1174</u> |        |           |                |                |                         |                          |                   |
| A3C0961-01            | Water  | EPA 8260D | 03/24/23 13:30 | 03/29/23 13:58 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3C0961-03            | Water  | EPA 8260D | 03/24/23 11:15 | 03/29/23 13:58 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3C0961-04            | Water  | EPA 8260D | 03/24/23 10:30 | 03/29/23 13:58 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3C0961-05            | Water  | EPA 8260D | 03/24/23 12:30 | 03/29/23 13:58 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| <u>Batch: 23C1207</u> |        |           |                |                |                         |                          |                   |
| A3C0961-04RE1         | Water  | EPA 8260D | 03/24/23 10:30 | 03/30/23 11:50 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| <u>Batch: 23D0057</u> |        |           |                |                |                         |                          |                   |
| A3C0961-02RE1         | Water  | EPA 8260D | 03/24/23 14:30 | 04/03/23 14:41 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

Prep: Method Prep: Ag

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23D0067</u> |        |           |                |                |                         |                          |                   |
| A3C0961-01            | Water  | SM 5310 C | 03/24/23 13:30 | 04/03/23 15:45 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3C0961-02            | Water  | SM 5310 C | 03/24/23 14:30 | 04/03/23 15:45 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3C0961-03            | Water  | SM 5310 C | 03/24/23 11:15 | 04/03/23 15:45 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3C0961-04            | Water  | SM 5310 C | 03/24/23 10:30 | 04/03/23 15:45 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3C0961-05            | Water  | SM 5310 C | 03/24/23 12:30 | 04/03/23 15:45 | 40mL/40mL               | 40mL/40mL                | 1.00              |

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Portland, OR 97224

Project: **OCS**

Project Number: **461M114811**  
Project Manager: **Russ Bunker**

**Report ID:**

**A3C0961 - 04 08 23 2122**

## QUALIFIER DEFINITIONS

### Client Sample and Quality Control (QC) Sample Qualifier Definitions:

#### Apex Laboratories

- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +17%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +20%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +29%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +34%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +7%. The results are reported as Estimated Values.
- Q-54l** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +8%. The results are reported as Estimated Values.
- Q-54m** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +9%. The results are reported as Estimated Values.
- Q-54n** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -5%. The results are reported as Estimated Values.
- Q-54o** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -9%. The results are reported as Estimated Values.

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Philip Nerenberg, Lab Director

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Project: OCS

Project Number: 461M114811  
Project Manager: Russ Bunker

Report ID:

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- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-06** Reporting level raised due to possible carryover from a previous sample.

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**Report ID:**  
**A3C0961 - 04 08 23 2122**

### REPORTING NOTES AND CONVENTIONS:

#### Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.  
ND Analyte NOT DETECTED at or above the detection or reporting limit.  
NR Result Not Reported  
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

#### Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).  
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

#### Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

#### Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.  
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")  
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

#### QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

#### Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" \*\*\* " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

#### Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).  
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.  
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.  
For further details, please request a copy of this document.

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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503-718-2323  
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**WSP USA Environment & Infrastructure Inc.**  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker**

**Report ID:**  
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### REPORTING NOTES AND CONVENTIONS (Cont.):

#### Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

#### Preparation Notes:

##### Mixed Matrix Samples:

##### Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

##### Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

#### Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3C0961 - 04 08 23 2122**

### LABORATORY ACCREDITATION INFORMATION

**ORELAP Certification ID: OR100062 (Primary Accreditation)** -  
**EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

#### **Apex Laboratories**

| Matrix                                                                                | Analysis | TNI_ID | Analyte | TNI_ID | Accreditation |
|---------------------------------------------------------------------------------------|----------|--------|---------|--------|---------------|
| <u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u> |          |        |         |        |               |

#### **Secondary Accreditations**

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

#### **Subcontract Laboratory Accreditations**

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.  
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

#### **Field Testing Parameters**

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

Project: OCS

15862 SW 72nd Ave. Suite 150

Project Number: 461M114811

Portland, OR 97224

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

|                                                                      |                                                          |                                   |                              |                                               |                                                                                              |
|----------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------|------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------|
| APEX LABS<br>6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323 |                                                          | CHAIN OF CUSTODY                  |                              | Lab # <u>A3C0961</u> COC <u>1</u> of <u>1</u> |                                                                                              |
| Company: <u>WSP</u>                                                  | Project Mgr: <u>Russ Bunker</u>                          | Project Name: <u>OCS</u>          | Project #: <u>461M114811</u> | PO #                                          |                                                                                              |
| Address: <u>15862 SW 72nd Portland, OR</u>                           | Phone: <u>503 775 4892</u>                               | Email: <u>ross.bunker@wsp.com</u> |                              |                                               |                                                                                              |
| Sampled by: <u>Jason Gardner</u>                                     |                                                          |                                   |                              |                                               |                                                                                              |
| Site Location:                                                       |                                                          |                                   |                              |                                               |                                                                                              |
| State <u>OR</u>                                                      |                                                          |                                   |                              |                                               |                                                                                              |
| County <u>Clackamas</u>                                              |                                                          |                                   |                              |                                               |                                                                                              |
| SAMPLE ID                                                            |                                                          |                                   |                              |                                               |                                                                                              |
| <u>AW1-20230324</u>                                                  | DATE <u>3/24/23</u>                                      | TIME <u>13:30</u>                 | MATRIX <u>W</u>              | # OF CONTAINERS <u>4</u>                      | NWTPH-HCID                                                                                   |
| <u>MW16-20230324</u>                                                 | <u>14:30</u>                                             | <u>14:30</u>                      |                              |                                               | NWTPH-CX                                                                                     |
| <u>MW17-20230324</u>                                                 | <u>11:15</u>                                             | <u>11:15</u>                      |                              |                                               | NWTPH-DX                                                                                     |
| <u>MW18-20230324</u>                                                 | <u>10:30</u>                                             | <u>10:30</u>                      |                              |                                               | 8260 BTEX                                                                                    |
| <u>MW19-20230324</u>                                                 | <u>12:30</u>                                             | <u>12:30</u>                      |                              |                                               | 8260 RBDM VOCs                                                                               |
|                                                                      |                                                          |                                   |                              |                                               | 8260 Halo VOCs                                                                               |
|                                                                      |                                                          |                                   |                              |                                               | 8260 VOCs Full List                                                                          |
|                                                                      |                                                          |                                   |                              |                                               | 8270 SIM PAHs                                                                                |
|                                                                      |                                                          |                                   |                              |                                               | 8270 Semi-Vols Full List                                                                     |
|                                                                      |                                                          |                                   |                              |                                               | 8082 PCBs                                                                                    |
|                                                                      |                                                          |                                   |                              |                                               | 8081 Pesticides                                                                              |
|                                                                      |                                                          |                                   |                              |                                               | RCRA Metals (8)                                                                              |
|                                                                      |                                                          |                                   |                              |                                               | Priority Metals (13)                                                                         |
|                                                                      |                                                          |                                   |                              |                                               | Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn |
|                                                                      |                                                          |                                   |                              |                                               | TOTAL DISS. TCIP                                                                             |
|                                                                      |                                                          |                                   |                              |                                               | TCIP Metals (8)                                                                              |
|                                                                      |                                                          |                                   |                              |                                               | VOCs                                                                                         |
|                                                                      |                                                          |                                   |                              |                                               | TOC                                                                                          |
|                                                                      |                                                          |                                   |                              |                                               | Hold Sample                                                                                  |
|                                                                      |                                                          |                                   |                              |                                               | Frozen Archive                                                                               |
| SPECIAL INSTRUCTIONS:                                                |                                                          |                                   |                              |                                               |                                                                                              |
| Standard Turn Around Time (TAT) = 10 Business Days                   |                                                          |                                   |                              |                                               |                                                                                              |
| TAT Requested (circle) 1 Day 2 Day 3 Day 5 Day Standard Other: _____ |                                                          |                                   |                              |                                               |                                                                                              |
| SAMPLES ARE HELD FOR 30 DAYS                                         |                                                          |                                   |                              |                                               |                                                                                              |
| RELINQUISHED BY:<br>Signature: _____<br>Date: <u>3/24/23</u>         | RECEIVED BY:<br>Signature: _____<br>Date: <u>3/27/23</u> |                                   |                              |                                               |                                                                                              |
| Printed Name: <u>Jason Gardner</u>                                   | Printed Name: <u>Alissa Wilbur</u>                       |                                   |                              |                                               |                                                                                              |
| Company: <u>WSP</u>                                                  | Company: <u>Apex</u>                                     |                                   |                              |                                               |                                                                                              |

Form Y-002 R-00

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3C0961 - 04 08 23 2122

## APEX LABS COOLER RECEIPT FORM

Client: WSP Element WO#: A3C0961

Project/Project #: OCS 461M114811

## Delivery Info:

Date/time received: 3/27/23 @ 13:25 By: AAW

Delivered by: Apex Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other

Cooler Inspection Date/time inspected: 3/27/23 @ 13:25 By: AAW

Chain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

|                            | Cooler #1 | Cooler #2 | Cooler #3 | Cooler #4 | Cooler #5 | Cooler #6 | Cooler #7 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temperature (°C)           | 1.1       |           |           |           |           |           |           |
| Custody seals? (Y/N)       | N         |           |           |           |           |           |           |
| Received on ice? (Y/N)     | Y         |           |           |           |           |           |           |
| Temp. blanks? (Y/N)        | N         |           |           |           |           |           |           |
| Ice type: (Gel/Real/Other) | Gel       |           |           |           |           |           |           |
| Condition (In/Out):        | In        |           |           |           |           |           |           |

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐

Sample Inspection: Date/time inspected: 3/27/23 @ 13:49 By: ZAM

All samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☒ Comments: TB provided, not on cool.COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☐ No ☒ NA ☐

Comments:

Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐

Comments:

Additional information: TB# 3270

Labeled by:

ZAM

Witness:

AAW

Cooler Inspected by:

AAW

Form Y-003 R-00

Apex Laboratories

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Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

Monday, July 31, 2023

Russ Bunker

WSP USA Environment & Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

RE: A3G1248 - OCS - 461M114814.02

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3G1248, which was received by the laboratory on 7/18/2023 at 9:08:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

---

Cooler Receipt Information

(See Cooler Receipt Form for details)

Default Cooler      0.4      degC

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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 461M114814.02  
Project Manager: Russ Bunker

Report ID:  
A3G1248 - 07 31 23 1914

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

| Client Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|------------------|---------------|--------|----------------|----------------|
| MW16-20230717    | A3G1248-01    | Water  | 07/17/23 12:25 | 07/18/23 09:08 |
| MW17-20230717    | A3G1248-02    | Water  | 07/17/23 13:30 | 07/18/23 09:08 |
| RW1-20230717     | A3G1248-03    | Water  | 07/17/23 15:00 | 07/18/23 09:08 |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114814.02**  
Project Manager: **Russ Bunker****Report ID:**  
**A3G1248 - 07 31 23 1914**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref.             | Notes |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------------------|-------|
| <b>MW16-20230717 (A3G1248-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23G0733</b> | <b>H-04, R-04, V-01</b> |       |
| Acetone                              | 1100          | 500             | 1000            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Acrylonitrile                        | ND            | 50.0            | 100             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Benzene                              | ND            | 6.25            | 12.5            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Bromobenzene                         | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Bromochloromethane                   | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Bromodichloromethane                 | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Bromoform                            | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Bromomethane                         | ND            | 250             | 250             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 2-Butanone (MEK)                     | 2610          | 250             | 500             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| n-Butylbenzene                       | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| sec-Butylbenzene                     | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| tert-Butylbenzene                    | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Carbon disulfide                     | ND            | 250             | 500             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Carbon tetrachloride                 | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Chlorobenzene                        | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Chloroethane                         | ND            | 250             | 250             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Chloroform                           | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Chloromethane                        | ND            | 125             | 250             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 2-Chlorotoluene                      | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 4-Chlorotoluene                      | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Dibromochloromethane                 | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2-Dibromo-3-chloropropane          | ND            | 125             | 250             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2-Dibromoethane (EDB)              | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Dibromomethane                       | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2-Dichlorobenzene                  | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,3-Dichlorobenzene                  | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,4-Dichlorobenzene                  | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Dichlorodifluoromethane              | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1-Dichloroethane                   | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2-Dichloroethane (EDC)             | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1-Dichloroethene                   | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| cis-1,2-Dichloroethene               | 501           | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| trans-1,2-Dichloroethene             | 32.0          | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |

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Philip Nerenberg, Lab Director

Page 3 of 40



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114814.02**  
Project Manager: **Russ Bunker****Report ID:**  
**A3G1248 - 07 31 23 1914**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref.             | Notes |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------------------|-------|
| <b>MW16-20230717 (A3G1248-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23G0733</b> | <b>H-04, R-04, V-01</b> |       |
| 1,2-Dichloropropane                  | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,3-Dichloropropane                  | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 2,2-Dichloropropane                  | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1-Dichloropropene                  | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| cis-1,3-Dichloropropene              | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| trans-1,3-Dichloropropene            | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Ethylbenzene                         | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Hexachlorobutadiene                  | ND            | 125             | 250             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 2-Hexanone                           | ND            | 250             | 500             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Isopropylbenzene                     | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 4-Isopropyltoluene                   | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Methylene chloride                   | ND            | 250             | 500             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 4-Methyl-2-pentanone (MIBK)          | ND            | 250             | 500             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Methyl tert-butyl ether (MTBE)       | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Naphthalene                          | ND            | 100             | 200             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| n-Propylbenzene                      | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Styrene                              | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1,1,2-Tetrachloroethane            | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1,2,2-Tetrachloroethane            | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Tetrachloroethene (PCE)              | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Toluene                              | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2,3-Trichlorobenzene               | ND            | 50.0            | 100             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2,4-Trichlorobenzene               | ND            | 50.0            | 100             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1,1-Trichloroethane                | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,1,2-Trichloroethane                | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Trichloroethene (TCE)                | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| Trichlorofluoromethane               | ND            | 50.0            | 100             | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2,3-Trichloropropane               | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,2,4-Trimethylbenzene               | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| 1,3,5-Trimethylbenzene               | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| <b>Vinyl chloride</b>                | <b>77.0</b>   | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| m,p-Xylene                           | ND            | 25.0            | 50.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |
| o-Xylene                             | ND            | 12.5            | 25.0            | ug/L                 | 50       | 07/25/23 18:52        | EPA 8260D               |       |

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit      | Reporting Limit  | Units | Dilution              | Date Analyzed  | Method Ref.             | Notes |
|---------------------------------------|---------------|----------------------|------------------|-------|-----------------------|----------------|-------------------------|-------|
| <b>MW16-20230717 (A3G1248-01RE1)</b>  |               | <b>Matrix: Water</b> |                  |       | <b>Batch: 23G0733</b> |                | <b>H-04, R-04, V-01</b> |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 102 %      | Limits: 80-120 % | 1     |                       | 07/25/23 18:52 | EPA 8260D               |       |
| Toluene-d8 (Surr)                     |               | 104 %                | 80-120 %         | 1     |                       | 07/25/23 18:52 | EPA 8260D               |       |
| 4-Bromofluorobenzene (Surr)           |               | 98 %                 | 80-120 %         | 1     |                       | 07/25/23 18:52 | EPA 8260D               |       |
| <b>MW17-20230717 (A3G1248-02RE1)</b>  |               | <b>Matrix: Water</b> |                  |       | <b>Batch: 23G0733</b> |                | <b>H-04, R-04, V-01</b> |       |
| Acetone                               | ND            | 500                  | 1000             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Acrylonitrile                         | ND            | 50.0                 | 100              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Benzene                               | ND            | 6.25                 | 12.5             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Bromobenzene                          | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Bromochloromethane                    | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Bromodichloromethane                  | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Bromoform                             | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Bromomethane                          | ND            | 250                  | 250              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 2-Butanone (MEK)                      | 662           | 250                  | 500              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| n-Butylbenzene                        | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| sec-Butylbenzene                      | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| tert-Butylbenzene                     | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Carbon disulfide                      | ND            | 250                  | 500              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Carbon tetrachloride                  | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Chlorobenzene                         | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Chloroethane                          | ND            | 250                  | 250              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Chloroform                            | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Chloromethane                         | ND            | 125                  | 250              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 2-Chlorotoluene                       | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 4-Chlorotoluene                       | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Dibromochloromethane                  | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 1,2-Dibromo-3-chloropropane           | ND            | 125                  | 250              | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 1,2-Dibromoethane (EDB)               | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Dibromomethane                        | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 1,2-Dichlorobenzene                   | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 1,3-Dichlorobenzene                   | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 1,4-Dichlorobenzene                   | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Dichlorodifluoromethane               | ND            | 25.0                 | 50.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| 1,1-Dichloroethane                    | ND            | 12.5                 | 25.0             | ug/L  | 50                    | 07/25/23 19:37 | EPA 8260D               |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes            |
|--------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|------------------|
| MW17-20230717 (A3G1248-02RE1)  |               |                 |                 | Matrix: Water |          | Batch: 23G0733 |             | H-04, R-04, V-01 |
| 1,2-Dichloroethane (EDC)       | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,1-Dichloroethene             | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| cis-1,2-Dichloroethene         | 15.5          | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   | J                |
| trans-1,2-Dichloroethene       | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,2-Dichloropropane            | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,3-Dichloropropane            | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 2,2-Dichloropropane            | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,1-Dichloropropene            | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| cis-1,3-Dichloropropene        | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| trans-1,3-Dichloropropene      | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Ethylbenzene                   | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Hexachlorobutadiene            | ND            | 125             | 250             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 2-Hexanone                     | ND            | 250             | 500             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Isopropylbenzene               | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 4-Isopropyltoluene             | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Methylene chloride             | ND            | 250             | 500             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 4-Methyl-2-pentanone (MIBK)    | ND            | 250             | 500             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Methyl tert-butyl ether (MTBE) | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Naphthalene                    | ND            | 100             | 200             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| n-Propylbenzene                | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Styrene                        | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,1,1,2-Tetrachloroethane      | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,1,2,2-Tetrachloroethane      | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Tetrachloroethene (PCE)        | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Toluene                        | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,2,3-Trichlorobenzene         | ND            | 50.0            | 100             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,2,4-Trichlorobenzene         | ND            | 50.0            | 100             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,1,1-Trichloroethane          | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,1,2-Trichloroethane          | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Trichloroethene (TCE)          | ND            | 12.5            | 25.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| Trichlorofluoromethane         | ND            | 50.0            | 100             | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,2,3-Trichloropropane         | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |
| 1,2,4-Trimethylbenzene         | ND            | 25.0            | 50.0            | ug/L          | 50       | 07/25/23 19:37 | EPA 8260D   |                  |

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## ANALYTICAL REPORT

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503-718-2323

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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit      | Reporting Limit | Units            | Dilution              | Date Analyzed  | Method Ref.             | Notes |
|---------------------------------------|---------------|----------------------|-----------------|------------------|-----------------------|----------------|-------------------------|-------|
| <b>MW17-20230717 (A3G1248-02RE1)</b>  |               | <b>Matrix: Water</b> |                 |                  | <b>Batch: 23G0733</b> |                | <b>H-04, R-04, V-01</b> |       |
| 1,3,5-Trimethylbenzene                | ND            | 25.0                 | 50.0            | ug/L             | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Vinyl chloride                        | ND            | 12.5                 | 25.0            | ug/L             | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| m,p-Xylene                            | ND            | 25.0                 | 50.0            | ug/L             | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| o-Xylene                              | ND            | 12.5                 | 25.0            | ug/L             | 50                    | 07/25/23 19:37 | EPA 8260D               |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 106 %      |                 | Limits: 80-120 % | 1                     | 07/25/23 19:37 | EPA 8260D               |       |
| Toluene-d8 (Surr)                     |               | 104 %                |                 | 80-120 %         | 1                     | 07/25/23 19:37 | EPA 8260D               |       |
| 4-Bromofluorobenzene (Surr)           |               | 99 %                 |                 | 80-120 %         | 1                     | 07/25/23 19:37 | EPA 8260D               |       |
| <b>RW1-20230717 (A3G1248-03RE1)</b>   |               | <b>Matrix: Water</b> |                 |                  | <b>Batch: 23G0733</b> |                |                         |       |
| Acetone                               | ND            | 10.0                 | 20.0            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Acrylonitrile                         | ND            | 1.00                 | 2.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Benzene                               | ND            | 0.125                | 0.250           | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Bromobenzene                          | ND            | 0.250                | 0.500           | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Bromochloromethane                    | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Bromodichloromethane                  | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Bromoform                             | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Bromomethane                          | ND            | 5.00                 | 5.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| 2-Butanone (MEK)                      | ND            | 5.00                 | 10.0            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| n-Butylbenzene                        | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| sec-Butylbenzene                      | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| tert-Butylbenzene                     | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Carbon disulfide                      | ND            | 5.00                 | 10.0            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Carbon tetrachloride                  | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Chlorobenzene                         | ND            | 0.250                | 0.500           | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Chloroethane                          | ND            | 5.00                 | 5.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Chloroform                            | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Chloromethane                         | ND            | 2.50                 | 5.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| 2-Chlorotoluene                       | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| 4-Chlorotoluene                       | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Dibromochloromethane                  | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| 1,2-Dibromo-3-chloropropane           | ND            | 2.50                 | 5.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| 1,2-Dibromoethane (EDB)               | ND            | 0.250                | 0.500           | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |
| Dibromomethane                        | ND            | 0.500                | 1.00            | ug/L             | 1                     | 07/25/23 14:22 | EPA 8260D               |       |

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|--------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| RW1-20230717 (A3G1248-03RE1)   |               |                 |                 | Matrix: Water |          | Batch: 23G0733 |             |       |
| 1,2-Dichlorobenzene            | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,3-Dichlorobenzene            | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,4-Dichlorobenzene            | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Dichlorodifluoromethane        | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,1-Dichloroethane             | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)       | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,1-Dichloroethene             | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| cis-1,2-Dichloroethene         | 26.4          | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| trans-1,2-Dichloroethene       | 0.730         | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,2-Dichloropropane            | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,3-Dichloropropane            | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 2,2-Dichloropropane            | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,1-Dichloropropene            | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| cis-1,3-Dichloropropene        | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| trans-1,3-Dichloropropene      | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Ethylbenzene                   | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Hexachlorobutadiene            | ND            | 2.50            | 5.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 2-Hexanone                     | ND            | 5.00            | 10.0            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Isopropylbenzene               | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 4-Isopropyltoluene             | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Methylene chloride             | ND            | 5.00            | 10.0            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MiBK)    | ND            | 5.00            | 10.0            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE) | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Naphthalene                    | ND            | 2.00            | 4.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| n-Propylbenzene                | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Styrene                        | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane      | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane      | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Tetrachloroethene (PCE)        | 0.810         | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| Toluene                        | ND            | 0.500           | 1.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene         | ND            | 1.00            | 2.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene         | ND            | 1.00            | 2.00            | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |
| 1,1,1-Trichloroethane          | ND            | 0.250           | 0.500           | ug/L          | 1        | 07/25/23 14:22 | EPA 8260D   |       |

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503-718-2323

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit | Reporting Limit | Units            | Dilution       | Date Analyzed  | Method Ref. | Notes |
|---------------------------------------|---------------|-----------------|-----------------|------------------|----------------|----------------|-------------|-------|
| RW1-20230717 (A3G1248-03RE1)          |               | Matrix: Water   |                 |                  | Batch: 23G0733 |                |             |       |
| 1,1,2-Trichloroethane                 | ND            | 0.250           | 0.500           | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| Trichloroethene (TCE)                 | 29.1          | 0.250           | 0.500           | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| Trichlorofluoromethane                | ND            | 1.00            | 2.00            | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| 1,2,3-Trichloropropane                | ND            | 0.500           | 1.00            | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| 1,2,4-Trimethylbenzene                | ND            | 0.500           | 1.00            | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| 1,3,5-Trimethylbenzene                | ND            | 0.500           | 1.00            | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| Vinyl chloride                        | ND            | 0.250           | 0.500           | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| m,p-Xylene                            | ND            | 0.500           | 1.00            | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| o-Xylene                              | ND            | 0.250           | 0.500           | ug/L             | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 111 % |                 | Limits: 80-120 % | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| Toluene-d8 (Surr)                     |               | 103 %           |                 | 80-120 %         | 1              | 07/25/23 14:22 | EPA 8260D   |       |
| 4-Bromofluorobenzene (Surr)           |               | 100 %           |                 | 80-120 %         | 1              | 07/25/23 14:22 | EPA 8260D   |       |

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ANALYTICAL SAMPLE RESULTS

Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                       | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|-------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| MW16-20230717 (A3G1248-01RE1) |               |                 |                 | Matrix: Water |          | Batch: 23G0674 |             |       |
| Total Organic Carbon          | 8520          | ---             | 1000            | mg/L          | 1000     | 07/27/23 23:17 | SM 5310 C   |       |
| MW17-20230717 (A3G1248-02RE1) |               |                 |                 | Matrix: Water |          | Batch: 23G0674 |             |       |
| Total Organic Carbon          | 4790          | ---             | 500             | mg/L          | 500      | 07/27/23 23:47 | SM 5310 C   |       |
| RW1-20230717 (A3G1248-03RE1)  |               |                 |                 | Matrix: Water |          | Batch: 23G0674 |             |       |
| Total Organic Carbon          | 1.61          | ---             | 1.00            | mg/L          | 1        | 07/28/23 00:17 | SM 5310 C   |       |

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Report ID:

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23G0667-BLK1)        |        |                 | Prepared: 07/24/23 10:00 |       | Analyzed: 07/24/23 10:55 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | 10.0            | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | 1.00            | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | 0.125           | 0.250                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | 5.00            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | 5.00            | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | 5.00            | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | 5.00            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | 2.50            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | 2.50            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                                                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------------------------------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C                                                      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| Blank (23G0667-BLK1)                                                           |        |                 |                 |       |          | Prepared: 07/24/23 10:00 Analyzed: 07/24/23 10:55 |               |       |              |     |           |       |
| 1,2-Dichloropropane                                                            | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane                                                            | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane                                                            | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene                                                            | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene                                                        | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene                                                      | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                                                                   | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene                                                            | ND     | 2.50            | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                                                                     | ND     | 5.00            | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                                                               | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene                                                             | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride                                                             | ND     | 5.00            | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)                                                    | ND     | 5.00            | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)                                                 | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                                                                    | ND     | 2.00            | 4.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                                                                | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Styrene                                                                        | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane                                                      | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane                                                      | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)                                                        | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Toluene                                                                        | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene                                                         | ND     | 1.00            | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene                                                         | ND     | 1.00            | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane                                                          | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane                                                          | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)                                                          | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane                                                         | ND     | 1.00            | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane                                                         | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene                                                         | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene                                                         | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                                                                 | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                                                                     | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                                                                       | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) Recovery: 102 % Limits: 80-120 % Dilution: 1x |        |                 |                 |       |          |                                                   |               |       |              |     |           |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23G0667-BLK1)        |        |                 | Prepared: 07/24/23 10:00 |                  | Analyzed: 07/24/23 10:55 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 102 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23G0667-BS1)           |        |                 | Prepared: 07/24/23 10:00 |                  | Analyzed: 07/24/23 10:10 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 37.8   | 10.0            | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 94    | 80-120%      | --- | ---       | Q-56  |
| Acrylonitrile               | 21.2   | 1.00            | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| Benzene                     | 20.0   | 0.125           | 0.250                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 18.2   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 22.8   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 20.1   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Bromoform                   | 21.7   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Bromomethane                | 26.2   | 5.00            | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 131   | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)            | 40.1   | 5.00            | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 20.2   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 20.8   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 19.6   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 20.6   | 5.00            | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 22.0   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 19.7   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Chloroethane                | 22.3   | 5.00            | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| Chloroform                  | 19.9   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| Chloromethane               | 19.2   | 2.50            | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene             | 20.6   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 21.8   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 20.3   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 18.9   | 2.50            | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 20.3   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Dibromomethane              | 20.4   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 19.5   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 20.8   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 18.7   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 23.1   | 0.500           | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane          | 20.3   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **461M114814.02**Project Manager: **Russ Bunker****Report ID:****A3G1248 - 07 31 23 1914****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| LCS (23G0667-BS1)              |        |                 | Prepared: 07/24/23 10:00 |       | Analyzed: 07/24/23 10:10 |              |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 20.0   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 21.8   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 20.0   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 19.5   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 19.6   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 19.6   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 22.3   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 21.8   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 21.6   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 22.0   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 21.6   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 19.9   | 2.50            | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 35.3   | 5.00            | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 88    | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 19.0   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 19.7   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| Methylene chloride             | 21.1   | 5.00            | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 40.0   | 5.00            | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 21.4   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 16.1   | 2.00            | 4.00                     | ug/L  | 1                        | 20.0         | ---           | 80    | 80-120%      | --- | ---       |       |
| n-Propylbenzene                | 21.6   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Styrene                        | 19.2   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 21.1   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 21.4   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 20.8   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Toluene                        | 19.9   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 19.5   | 1.00            | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 18.4   | 1.00            | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 20.8   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 19.3   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 19.3   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 23.0   | 1.00            | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichloropropane         | 20.7   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 20.1   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 20.2   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23G0667-BS1)                |        |                 | Prepared: 07/24/23 10:00 |                  | Analyzed: 07/24/23 10:10 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 21.2   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 40.6   | 0.500           | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 18.1   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23G0667-DUP1)

Prepared: 07/24/23 10:00 Analyzed: 07/24/23 17:43

## QC Source Sample: Non-SDG (A3G1211-01)

|                             |      |      |      |      |    |     |      |     |     |     |     |
|-----------------------------|------|------|------|------|----|-----|------|-----|-----|-----|-----|
| Acetone                     | ND   | 100  | 200  | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Acrylonitrile               | ND   | 10.0 | 20.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Benzene                     | ND   | 1.25 | 2.50 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromobenzene                | ND   | 2.50 | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromochloromethane          | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromodichloromethane        | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromoform                   | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromomethane                | ND   | 50.0 | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND   | 50.0 | 100  | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| n-Butylbenzene              | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Carbon disulfide            | ND   | 50.0 | 100  | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chlorobenzene               | 27.4 | 2.50 | 5.00 | ug/L | 10 | --- | 27.1 | --- | --- | 1   | 30% |
| Chloroethane                | ND   | 50.0 | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chloroform                  | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chloromethane               | ND   | 25.0 | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Dibromochloromethane        | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND   | 25.0 | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND   | 2.50 | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Dibromomethane              | ND   | 5.00 | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND   | 2.50 | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |

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Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23G0667-DUP1)               |        |                 | Prepared: 07/24/23 10:00 |       | Analyzed: 07/24/23 17:43 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1211-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | 3.60   | 2.50            | 5.00                     | ug/L  | 10                       | ---          | 3.60          | ---   | ---          | 0   | 30%       |       |
| Dichlorodifluoromethane                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                    | ND     | 25.0            | 50.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | 50.0            | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | 50.0            | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | 50.0            | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | 20.0            | 40.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | 10.0            | 20.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | 10.0            | 20.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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## ANALYTICAL REPORT

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C              |        |                 |                                                     |                  |          | Water        |               |       |              |     |           |       |
| Duplicate (23G0667-DUP1)               |        |                 | Prepared: 07/24/23 10:00   Analyzed: 07/24/23 17:43 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1211-01) |        |                 |                                                     |                  |          |              |               |       |              |     |           |       |
| Trichloroethene (TCE)                  | ND     | 2.50            | 5.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | 10.0            | 20.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | 5.00            | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | 5.00            | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | 5.00            | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                         | ND     | 2.50            | 5.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | ND     | 5.00            | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                               | ND     | 2.50            | 5.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 106 % |                                                     | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 103 %           |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 98 %            |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |

| Duplicate (23G0667-DUP2)                     |    |      |       | Prepared: 07/24/23 10:00    Analyzed: 07/24/23 19:35 |     |     |    |     |     |     |     | V-01 |
|----------------------------------------------|----|------|-------|------------------------------------------------------|-----|-----|----|-----|-----|-----|-----|------|
| QC Source Sample: MW17-20230717 (A3G1248-02) |    |      |       |                                                      |     |     |    |     |     |     |     |      |
| EPA 8260D                                    |    |      |       |                                                      |     |     |    |     |     |     |     |      |
| Acetone                                      | ND | 5000 | 10000 | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Acrylonitrile                                | ND | 500  | 1000  | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Benzene                                      | ND | 62.5 | 125   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Bromobenzene                                 | ND | 125  | 250   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Bromochloromethane                           | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Bromodichloromethane                         | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Bromoform                                    | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Bromomethane                                 | ND | 2500 | 2500  | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| 2-Butanone (MEK)                             | ND | 2500 | 5000  | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| n-Butylbenzene                               | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| sec-Butylbenzene                             | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| tert-Butylbenzene                            | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Carbon disulfide                             | ND | 2500 | 5000  | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Carbon tetrachloride                         | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Chlorobenzene                                | ND | 125  | 250   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Chloroethane                                 | ND | 2500 | 2500  | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Chloroform                                   | ND | 250  | 500   | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |
| Chloromethane                                | ND | 1250 | 2500  | ug/L                                                 | 500 | --- | ND | --- | --- | --- | 30% |      |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Result | Detection Limit | Reporting Limit          | Units | Dilution | Spike Amount | Source Result            | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------------|--------|-----------------|--------------------------|-------|----------|--------------|--------------------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C                    |        |                 |                          |       |          | Water        |                          |       |              |     |           |       |
| Duplicate (23G0667-DUP2)                     |        |                 | Prepared: 07/24/23 10:00 |       |          |              | Analyzed: 07/24/23 19:35 |       |              |     | V-01      |       |
| QC Source Sample: MW17-20230717 (A3G1248-02) |        |                 |                          |       |          |              |                          |       |              |     |           |       |
| 2-Chlorotoluene                              | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 4-Chlorotoluene                              | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Dibromochloromethane                         | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane                  | ND     | 1250            | 2500                     | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                      | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Dibromomethane                               | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                          | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                          | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                          | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                      | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                           | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)                     | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                           | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                       | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene                     | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                          | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                          | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                          | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                          | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                      | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene                    | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                                 | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                          | ND     | 1250            | 2500                     | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                                   | ND     | 2500            | 5000                     | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                             | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                           | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Methylene chloride                           | ND     | 2500            | 5000                     | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)                  | ND     | 2500            | 5000                     | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)               | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Naphthalene                                  | ND     | 1000            | 2000                     | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                              | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| Styrene                                      | ND     | 250             | 500                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane                    | ND     | 125             | 250                      | ug/L  | 500      | ---          | ND                       | ---   | ---          | --- | 30%       |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C                    |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Duplicate (23G0667-DUP2)                     |        |                 | Prepared: 07/24/23 10:00 |                  | Analyzed: 07/24/23 19:35 |              | V-01          |       |              |     |           |       |
| QC Source Sample: MW17-20230717 (A3G1248-02) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,1,2,2-Tetrachloroethane                    | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                      | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                      | ND     | 250             | 500                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                       | ND     | 500             | 1000                     | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                       | ND     | 500             | 1000                     | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                        | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                        | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichloroethene (TCE)                        | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                       | ND     | 500             | 1000                     | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                       | ND     | 250             | 500                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                       | ND     | 250             | 500                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                       | ND     | 250             | 500                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                               | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                                   | ND     | 250             | 500                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                                     | ND     | 125             | 250                      | ug/L             | 500                      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)             |        | Recovery: 107 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                            |        | 104 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)                  |        | 101 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Matrix Spike (23G0667-MS1)

Prepared: 07/24/23 10:00 Analyzed: 07/24/23 13:33

QC Source Sample: Non-SDG (A3G1310-01)

## EPA 8260D

|                      |      |       |       |      |   |      |    |     |         |     |     |      |
|----------------------|------|-------|-------|------|---|------|----|-----|---------|-----|-----|------|
| Acetone              | 37.9 | 10.0  | 20.0  | ug/L | 1 | 40.0 | ND | 95  | 39-160% | --- | --- |      |
| Acrylonitrile        | 20.6 | 1.00  | 2.00  | ug/L | 1 | 20.0 | ND | 103 | 63-135% | --- | --- |      |
| Benzene              | 21.5 | 0.125 | 0.250 | ug/L | 1 | 20.0 | ND | 107 | 79-120% | --- | --- |      |
| Bromobenzene         | 18.8 | 0.250 | 0.500 | ug/L | 1 | 20.0 | ND | 94  | 80-120% | --- | --- |      |
| Bromochloromethane   | 23.3 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND | 117 | 78-123% | --- | --- |      |
| Bromodichloromethane | 21.2 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND | 106 | 79-125% | --- | --- |      |
| Bromoform            | 21.9 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND | 110 | 66-130% | --- | --- |      |
| Bromomethane         | 28.1 | 5.00  | 5.00  | ug/L | 1 | 20.0 | ND | 140 | 53-141% | --- | --- | Q-54 |
| 2-Butanone (MEK)     | 40.5 | 5.00  | 10.0  | ug/L | 1 | 40.0 | ND | 101 | 56-143% | --- | --- |      |
| n-Butylbenzene       | 21.6 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND | 108 | 75-128% | --- | --- |      |
| sec-Butylbenzene     | 22.7 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND | 113 | 77-126% | --- | --- |      |

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Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit | Units                    | Dilution | Spike Amount             | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------|--------------------------|----------|--------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C              |        |                 |                 |                          |          | Water                    |               |       |              |     |           |       |
| Matrix Spike (23G0667-MS1)             |        |                 |                 | Prepared: 07/24/23 10:00 |          | Analyzed: 07/24/23 13:33 |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1310-01) |        |                 |                 |                          |          |                          |               |       |              |     |           |       |
| tert-Butylbenzene                      | 21.0   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 105   | 78-124%      | --- | ---       |       |
| Carbon disulfide                       | 22.7   | 5.00            | 10.0            | ug/L                     | 1        | 20.0                     | ND            | 113   | 64-133%      | --- | ---       |       |
| Carbon tetrachloride                   | 24.0   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 120   | 72-136%      | --- | ---       |       |
| Chlorobenzene                          | 20.8   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 104   | 80-120%      | --- | ---       |       |
| Chloroethane                           | 24.3   | 5.00            | 5.00            | ug/L                     | 1        | 20.0                     | ND            | 122   | 60-138%      | --- | ---       |       |
| Chloroform                             | 21.2   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 106   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 21.0   | 2.50            | 5.00            | ug/L                     | 1        | 20.0                     | ND            | 105   | 50-139%      | --- | ---       |       |
| 2-Chlorotoluene                        | 21.8   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 109   | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 23.1   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 116   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 21.0   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 105   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 19.1   | 2.50            | 5.00            | ug/L                     | 1        | 20.0                     | ND            | 96    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 20.8   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 104   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 20.7   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 103   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 19.9   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 100   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 21.6   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 108   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 19.5   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 97    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 25.4   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 127   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 21.8   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 109   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 20.8   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 104   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 24.2   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 121   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 21.6   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 108   | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 21.4   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 107   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 20.7   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 103   | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 20.4   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 102   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 23.8   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 119   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 24.1   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 120   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 19.2   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 96    | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 23.1   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 115   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 23.3   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ND            | 116   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 20.7   | 2.50            | 5.00            | ug/L                     | 1        | 20.0                     | ND            | 104   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 36.0   | 5.00            | 10.0            | ug/L                     | 1        | 40.0                     | ND            | 90    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 20.8   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 104   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 21.1   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ND            | 105   | 77-127%      | --- | ---       |       |

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Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0667 - EPA 5030C              |        |                 |                                                      |                  |          | Water        |               |       |              |     |           |       |
| Matrix Spike (23G0667-MS1)             |        |                 | Prepared: 07/24/23 10:00    Analyzed: 07/24/23 13:33 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1310-01) |        |                 |                                                      |                  |          |              |               |       |              |     |           |       |
| Methylene chloride                     | 20.3   | 5.00            | 10.0                                                 | ug/L             | 1        | 20.0         | ND            | 102   | 74-124%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)            | 40.7   | 5.00            | 10.0                                                 | ug/L             | 1        | 40.0         | ND            | 102   | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 22.0   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 110   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 16.9   | 2.00            | 4.00                                                 | ug/L             | 1        | 20.0         | ND            | 85    | 61-128%      | --- | ---       |       |
| n-Propylbenzene                        | 23.3   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 116   | 76-126%      | --- | ---       |       |
| Styrene                                | 20.7   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 104   | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 21.9   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 110   | 78-124%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane              | 21.4   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 107   | 71-121%      | --- | ---       |       |
| Tetrachloroethene (PCE)                | 22.0   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 110   | 74-129%      | --- | ---       |       |
| Toluene                                | 21.3   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 106   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 20.2   | 1.00            | 2.00                                                 | ug/L             | 1        | 20.0         | ND            | 101   | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 19.7   | 1.00            | 2.00                                                 | ug/L             | 1        | 20.0         | ND            | 98    | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 22.8   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 114   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 19.8   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 99    | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 20.4   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 102   | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 25.2   | 1.00            | 2.00                                                 | ug/L             | 1        | 20.0         | ND            | 126   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 20.9   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 104   | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 21.2   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 106   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 21.6   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 108   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 24.2   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 121   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 44.3   | 0.500           | 1.00                                                 | ug/L             | 1        | 40.0         | ND            | 111   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 19.5   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 98    | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                                                      | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 98 %            |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 92 %            |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23G0733-BLK1)        |        |                 | Prepared: 07/25/23 09:00 |       | Analyzed: 07/25/23 11:23 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | 10.0            | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | 1.00            | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | 0.125           | 0.250                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | 5.00            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | 5.00            | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | 5.00            | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | 5.00            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | 2.50            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | 2.50            | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | 0.500           | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | 0.250           | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                                                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------------------------------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C                                                      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| Blank (23G0733-BLK1)                                                           |        |                 |                 |       |          | Prepared: 07/25/23 09:00 Analyzed: 07/25/23 11:23 |               |       |              |     |           |       |
| 1,2-Dichloropropane                                                            | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane                                                            | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane                                                            | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene                                                            | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene                                                        | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene                                                      | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                                                                   | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene                                                            | ND     | 2.50            | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                                                                     | ND     | 5.00            | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                                                               | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene                                                             | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride                                                             | ND     | 5.00            | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)                                                    | ND     | 5.00            | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)                                                 | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                                                                    | ND     | 2.00            | 4.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                                                                | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Styrene                                                                        | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane                                                      | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane                                                      | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)                                                        | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Toluene                                                                        | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene                                                         | ND     | 1.00            | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene                                                         | ND     | 1.00            | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane                                                          | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane                                                          | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)                                                          | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane                                                         | ND     | 1.00            | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane                                                         | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene                                                         | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene                                                         | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                                                                 | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                                                                     | ND     | 0.500           | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                                                                       | ND     | 0.250           | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x |        |                 |                 |       |          |                                                   |               |       |              |     |           |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit | Units                    | Dilution | Spike Amount             | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|-----------------|--------------------------|----------|--------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C   |        |                 |                 |                          |          | Water                    |               |       |              |     |           |       |
| Blank (23G0733-BLK1)        |        |                 |                 | Prepared: 07/25/23 09:00 |          | Analyzed: 07/25/23 11:23 |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 103 % |                 | Limits: 80-120 %         |          | Dilution: 1x             |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 101 %           |                 | 80-120 %                 |          | "                        |               |       |              |     |           |       |
| LCS (23G0733-BS1)           |        |                 |                 | Prepared: 07/25/23 09:00 |          | Analyzed: 07/25/23 10:28 |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                 |                          |          |                          |               |       |              |     |           |       |
| Acetone                     | 39.1   | 10.0            | 20.0            | ug/L                     | 1        | 40.0                     | ---           | 98    | 80-120%      | --- | ---       | Q-56  |
| Acrylonitrile               | 21.5   | 1.00            | 2.00            | ug/L                     | 1        | 20.0                     | ---           | 108   | 80-120%      | --- | ---       |       |
| Benzene                     | 20.0   | 0.125           | 0.250           | ug/L                     | 1        | 20.0                     | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 18.5   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 92    | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 22.9   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 114   | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 20.2   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 101   | 80-120%      | --- | ---       |       |
| Bromoform                   | 21.6   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 108   | 80-120%      | --- | ---       |       |
| Bromomethane                | 26.9   | 5.00            | 5.00            | ug/L                     | 1        | 20.0                     | ---           | 134   | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)            | 42.0   | 5.00            | 10.0            | ug/L                     | 1        | 40.0                     | ---           | 105   | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 20.3   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 102   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 20.9   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 104   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 19.8   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 99    | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 20.4   | 5.00            | 10.0            | ug/L                     | 1        | 20.0                     | ---           | 102   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 21.8   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 109   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 19.8   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 99    | 80-120%      | --- | ---       |       |
| Chloroethane                | 22.7   | 5.00            | 5.00            | ug/L                     | 1        | 20.0                     | ---           | 113   | 80-120%      | --- | ---       |       |
| Chloroform                  | 20.0   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 100   | 80-120%      | --- | ---       |       |
| Chloromethane               | 19.8   | 2.50            | 5.00            | ug/L                     | 1        | 20.0                     | ---           | 99    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene             | 20.7   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 103   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 22.4   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 112   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 20.6   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 19.1   | 2.50            | 5.00            | ug/L                     | 1        | 20.0                     | ---           | 96    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 20.6   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 103   | 80-120%      | --- | ---       |       |
| Dibromomethane              | 20.2   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 19.6   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 98    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 21.0   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 18.9   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 94    | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 22.8   | 0.500           | 1.00            | ug/L                     | 1        | 20.0                     | ---           | 114   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane          | 20.4   | 0.250           | 0.500           | ug/L                     | 1        | 20.0                     | ---           | 102   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| LCS (23G0733-BS1)              |        |                 |                 |       |          | Prepared: 07/25/23 09:00 Analyzed: 07/25/23 10:28 |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 20.4   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 22.3   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 112   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 20.3   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 19.8   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 19.5   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 19.9   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 22.9   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 114   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 21.8   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 109   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 22.1   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 110   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 23.0   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 115   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 21.7   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 109   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 19.8   | 2.50            | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 35.6   | 5.00            | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 89    | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 19.0   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 95    | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 19.8   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Methylene chloride             | 20.6   | 5.00            | 10.0            | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 41.3   | 5.00            | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 21.6   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 108   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 15.9   | 2.00            | 4.00            | ug/L  | 1        | 20.0                                              | ---           | 80    | 80-120%      | --- | ---       |       |
| n-Propylbenzene                | 21.8   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 109   | 80-120%      | --- | ---       |       |
| Styrene                        | 19.6   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 98    | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 21.3   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 22.2   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 111   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 20.6   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| Toluene                        | 20.1   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 19.2   | 1.00            | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 18.0   | 1.00            | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 90    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 21.0   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 19.6   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 98    | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 19.0   | 0.250           | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 95    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 22.9   | 1.00            | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 115   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichloropropane         | 21.7   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 108   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 20.3   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 20.3   | 0.500           | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23G0733-BS1)                |        |                 | Prepared: 07/25/23 09:00 |                  | Analyzed: 07/25/23 10:28 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 22.0   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 41.4   | 0.500           | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 18.1   | 0.250           | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 100 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 93 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23G0733-DUP1)

Prepared: 07/25/23 09:00 Analyzed: 07/25/23 18:07

## QC Source Sample: Non-SDG (A3G1346-01)

|                             |    |      |      |      |    |     |    |     |     |     |     |
|-----------------------------|----|------|------|------|----|-----|----|-----|-----|-----|-----|
| Acetone                     | ND | 100  | 200  | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Acrylonitrile               | ND | 10.0 | 20.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Benzene                     | ND | 1.25 | 2.50 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromobenzene                | ND | 2.50 | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromochloromethane          | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromoform                   | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Bromomethane                | ND | 50.0 | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | 50.0 | 100  | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Carbon disulfide            | ND | 50.0 | 100  | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chlorobenzene               | ND | 2.50 | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chloroethane                | ND | 50.0 | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chloroform                  | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Chloromethane               | ND | 25.0 | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | 25.0 | 50.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | 2.50 | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| Dibromomethane              | ND | 5.00 | 10.0 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND | 2.50 | 5.00 | ug/L | 10 | --- | ND | --- | --- | --- | 30% |

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Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23G0733-DUP1)               |        |                 | Prepared: 07/25/23 09:00 |       | Analyzed: 07/25/23 18:07 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1346-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                    | ND     | 25.0            | 50.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | 50.0            | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | 50.0            | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | 50.0            | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | 20.0            | 40.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | ND     | 5.00            | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | 10.0            | 20.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | 10.0            | 20.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | 2.50            | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                   | Units            | Dilution | Spike Amount | Source Result | % REC | Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|---------------------------------------------------|------------------|----------|--------------|---------------|-------|--------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C              |        |                 |                                                   |                  |          | Water        |               |       |        |     |           |       |
| Duplicate (23G0733-DUP1)               |        |                 | Prepared: 07/25/23 09:00 Analyzed: 07/25/23 18:07 |                  |          |              |               |       |        |     |           |       |
| QC Source Sample: Non-SDG (A3G1346-01) |        |                 |                                                   |                  |          |              |               |       |        |     |           |       |
| Trichloroethene (TCE)                  | ND     | 2.50            | 5.00                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | 10.0            | 20.0                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | 5.00            | 10.0                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | 5.00            | 10.0                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | 5.00            | 10.0                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Vinyl chloride                         | ND     | 2.50            | 5.00                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| m,p-Xylene                             | ND     | 5.00            | 10.0                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| o-Xylene                               | ND     | 2.50            | 5.00                                              | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 106 % |                                                   | Limits: 80-120 % |          | Dilution: 1x |               |       |        |     |           |       |
| Toluene-d8 (Surr)                      |        | 105 %           |                                                   | 80-120 %         |          | "            |               |       |        |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 101 %           |                                                   | 80-120 %         |          | "            |               |       |        |     |           |       |
| Duplicate (23G0733-DUP2)               |        |                 | Prepared: 07/25/23 09:00 Analyzed: 07/25/23 20:44 |                  |          |              |               |       |        |     |           |       |
| QC Source Sample: Non-SDG (A3G1370-01) |        |                 |                                                   |                  |          |              |               |       |        |     |           |       |
| Acetone                                | ND     | 1000            | 2000                                              | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Acrylonitrile                          | ND     | 200             | 200                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Benzene                                | 23200  | 12.5            | 25.0                                              | ug/L             | 100      | ---          | 23800         | ---   | ---    | 2   | 30%       | E     |
| Bromobenzene                           | ND     | 25.0            | 50.0                                              | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromochloromethane                     | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromodichloromethane                   | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromoform                              | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromomethane                           | ND     | 500             | 500                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 2-Butanone (MEK)                       | ND     | 500             | 1000                                              | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| n-Butylbenzene                         | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| sec-Butylbenzene                       | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| tert-Butylbenzene                      | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Carbon disulfide                       | ND     | 500             | 1000                                              | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Carbon tetrachloride                   | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chlorobenzene                          | ND     | 25.0            | 50.0                                              | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chloroethane                           | ND     | 500             | 500                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chloroform                             | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chloromethane                          | ND     | 250             | 500                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 2-Chlorotoluene                        | ND     | 50.0            | 100                                               | ug/L             | 100      | ---          | ND            | ---   | ---    | --- | 30%       |       |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C              |        |                 |                                                      |       |          | Water        |               |       |              |     |           |       |
| Duplicate (23G0733-DUP2)               |        |                 | Prepared: 07/25/23 09:00    Analyzed: 07/25/23 20:44 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1370-01) |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| 4-Chlorotoluene                        | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromochloromethane                   | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane            | ND     | 250             | 500                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromomethane                         | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                    | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                    | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | 377    | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | 390           | ---   | ---          | 3   | 30%       |       |
| Hexachlorobutadiene                    | ND     | 250             | 500                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | 500             | 1000                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | 500             | 1000                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | 500             | 1000                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | 314    | 50.0            | 100                                                  | ug/L  | 100      | ---          | 316           | ---   | ---          | 0.6 | 30%       |       |
| Naphthalene                            | ND     | 200             | 400                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | 50.0            | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | 25.0            | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |

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## ANALYTICAL REPORT

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C              |        |                 |                                                     |                  |          | Water        |               |       |              |     |           |       |
| Duplicate (23G0733-DUP2)               |        |                 | Prepared: 07/25/23 09:00   Analyzed: 07/25/23 20:44 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1370-01) |        |                 |                                                     |                  |          |              |               |       |              |     |           |       |
| Tetrachloroethene (PCE)                | ND     | 25.0            | 50.0                                                | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | 118    | 50.0            | 100                                                 | ug/L             | 100      | ---          | 116           | ---   | ---          | 2   | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | 100             | 200                                                 | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | 100             | 200                                                 | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | 25.0            | 50.0                                                | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | 25.0            | 50.0                                                | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichloroethene (TCE)                  | ND     | 25.0            | 50.0                                                | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | 100             | 200                                                 | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | 50.0            | 100                                                 | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | 50.0            | 100                                                 | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | 50.0            | 100                                                 | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                         | ND     | 25.0            | 50.0                                                | ug/L             | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | 126    | 50.0            | 100                                                 | ug/L             | 100      | ---          | 127           | ---   | ---          | 0.8 | 30%       |       |
| o-Xylene                               | 27.0   | 25.0            | 50.0                                                | ug/L             | 100      | ---          | 27.0          | ---   | ---          | 0   | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 92 %  |                                                     | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 105 %           |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 101 %           |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |

## Matrix Spike (23G0733-MS1)

Prepared: 07/25/23 09:00 Analyzed: 07/25/23 13:37

QC Source Sample: Non-SDG (A3G1360-01)

## EPA 8260D

|                      |      |       |       |      |   |      |      |     |         |     |     |       |
|----------------------|------|-------|-------|------|---|------|------|-----|---------|-----|-----|-------|
| Acetone              | 52.4 | 10.0  | 20.0  | ug/L | 1 | 40.0 | 25.2 | 68  | 39-160% | --- | --- |       |
| Acrylonitrile        | 21.6 | 1.00  | 2.00  | ug/L | 1 | 20.0 | ND   | 108 | 63-135% | --- | --- |       |
| Benzene              | 22.0 | 0.125 | 0.250 | ug/L | 1 | 20.0 | ND   | 110 | 79-120% | --- | --- |       |
| Bromobenzene         | 19.1 | 0.250 | 0.500 | ug/L | 1 | 20.0 | ND   | 95  | 80-120% | --- | --- |       |
| Bromochloromethane   | 24.5 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND   | 122 | 78-123% | --- | --- |       |
| Bromodichloromethane | 21.8 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND   | 109 | 79-125% | --- | --- |       |
| Bromoform            | 22.4 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND   | 112 | 66-130% | --- | --- |       |
| Bromomethane         | 31.4 | 5.00  | 5.00  | ug/L | 1 | 20.0 | ND   | 157 | 53-141% | --- | --- | Q-54a |
| 2-Butanone (MEK)     | 49.8 | 5.00  | 10.0  | ug/L | 1 | 40.0 | 10.4 | 98  | 56-143% | --- | --- |       |
| n-Butylbenzene       | 21.5 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND   | 108 | 75-128% | --- | --- |       |
| sec-Butylbenzene     | 22.6 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND   | 113 | 77-126% | --- | --- |       |
| tert-Butylbenzene    | 21.1 | 0.500 | 1.00  | ug/L | 1 | 20.0 | ND   | 106 | 78-124% | --- | --- |       |

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Project: OCS

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Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23G0733-MS1)             |        |                 | Prepared: 07/25/23 09:00 |       | Analyzed: 07/25/23 13:37 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1360-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Carbon disulfide                       | 23.6   | 5.00            | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 118   | 64-133%      | --- | ---       |       |
| Carbon tetrachloride                   | 24.8   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 124   | 72-136%      | --- | ---       |       |
| Chlorobenzene                          | 21.2   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 106   | 80-120%      | --- | ---       |       |
| Chloroethane                           | 26.7   | 5.00            | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 134   | 60-138%      | --- | ---       |       |
| Chloroform                             | 22.1   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 25.0   | 2.50            | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 125   | 50-139%      | --- | ---       |       |
| 2-Chlorotoluene                        | 22.1   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 23.6   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 118   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 21.5   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 18.9   | 2.50            | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 94    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 21.1   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 106   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 21.7   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 109   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 20.3   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 101   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 22.0   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 110   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 19.8   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 99    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 26.7   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 133   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 22.7   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 113   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 21.9   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 110   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 25.0   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 125   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 22.0   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 110   | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 21.8   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 109   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 21.2   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 106   | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 20.7   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 103   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 24.8   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 124   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 24.9   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 125   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 18.6   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 93    | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 23.4   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 117   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 23.5   | 0.250           | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 117   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 20.4   | 2.50            | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 35.2   | 5.00            | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 88    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 20.4   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 21.0   | 0.500           | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 21.3   | 5.00            | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 107   | 74-124%      | --- | ---       |       |

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Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0733 - EPA 5030C              |        |                 |                                                      |                  |          | Water        |               |       |              |     |           |       |
| Matrix Spike (23G0733-MS1)             |        |                 | Prepared: 07/25/23 09:00    Analyzed: 07/25/23 13:37 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3G1360-01) |        |                 |                                                      |                  |          |              |               |       |              |     |           |       |
| 4-Methyl-2-pentanone (MiBK)            | 41.4   | 5.00            | 10.0                                                 | ug/L             | 1        | 40.0         | ND            | 103   | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 22.3   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 111   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 15.5   | 2.00            | 4.00                                                 | ug/L             | 1        | 20.0         | ND            | 77    | 61-128%      | --- | ---       |       |
| n-Propylbenzene                        | 23.6   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 118   | 76-126%      | --- | ---       |       |
| Styrene                                | 20.8   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 104   | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 22.9   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 114   | 78-124%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane              | 22.9   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 115   | 71-121%      | --- | ---       |       |
| Tetrachloroethene (PCE)                | 22.4   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 112   | 74-129%      | --- | ---       |       |
| Toluene                                | 21.8   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 109   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 19.1   | 1.00            | 2.00                                                 | ug/L             | 1        | 20.0         | ND            | 96    | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 17.8   | 1.00            | 2.00                                                 | ug/L             | 1        | 20.0         | ND            | 89    | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 23.6   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 118   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 20.2   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 101   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 20.5   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 103   | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 26.4   | 1.00            | 2.00                                                 | ug/L             | 1        | 20.0         | ND            | 132   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 22.1   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 110   | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 21.7   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 108   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 21.8   | 0.500           | 1.00                                                 | ug/L             | 1        | 20.0         | ND            | 109   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 25.0   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 125   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 44.8   | 0.500           | 1.00                                                 | ug/L             | 1        | 40.0         | ND            | 112   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 19.2   | 0.250           | 0.500                                                | ug/L             | 1        | 20.0         | ND            | 96    | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                                                      | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 98 %            |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 91 %            |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |

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Portland, OR 97224Project: OCS  
Project Number: 461M114814.02  
Project Manager: Russ BunkerReport ID:  
A3G1248 - 07 31 23 1914

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                                       | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23G0674 - Method Prep: Aq               |        |                 |                                                      |       |          | Water        |               |       |              |     |           |       |
| Blank (23G0674-BLK1)                          |        |                 | Prepared: 07/24/23 08:56    Analyzed: 07/26/23 20:33 |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | ND     | ---             | 1.00                                                 | mg/L  | 1        | ---          | ---           | ---   | ---          | --- | ---       |       |
| LCS (23G0674-BS1)                             |        |                 | Prepared: 07/24/23 08:56    Analyzed: 07/26/23 21:03 |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 10.2   | ---             | 1.00                                                 | mg/L  | 1        | 10.0         | ---           | 102   | 90-114%      | --- | ---       |       |
| Matrix Spike (23G0674-MS1)                    |        |                 | Prepared: 07/24/23 08:56    Analyzed: 07/27/23 00:03 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3G1100-32)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 10.5   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | ND            | 105   | 85-115%      | --- | ---       |       |
| Matrix Spike Dup (23G0674-MSD1)               |        |                 | Prepared: 07/24/23 08:56    Analyzed: 07/27/23 00:33 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3G1100-32)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 10.5   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | ND            | 105   | 85-115%      | 0.2 | 15%       |       |

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503-718-2323

ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **461M114814.02**Project Manager: **Russ Bunker****Report ID:****A3G1248 - 07 31 23 1914****SAMPLE PREPARATION INFORMATION****Volatile Organic Compounds by EPA 8260D**Prep: EPA 5030C

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23G0733</u> |        |           |                |                |                         |                          |                   |
| A3G1248-01RE1         | Water  | EPA 8260D | 07/17/23 12:25 | 07/25/23 09:00 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3G1248-02RE1         | Water  | EPA 8260D | 07/17/23 13:30 | 07/25/23 09:00 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3G1248-03RE1         | Water  | EPA 8260D | 07/17/23 15:00 | 07/25/23 09:00 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |

**Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C**Prep: Method Prep: Aq

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23G0674</u> |        |           |                |                |                         |                          |                   |
| A3G1248-01RE1         | Water  | SM 5310 C | 07/17/23 12:25 | 07/24/23 08:56 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3G1248-02RE1         | Water  | SM 5310 C | 07/17/23 13:30 | 07/24/23 08:56 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3G1248-03RE1         | Water  | SM 5310 C | 07/17/23 15:00 | 07/24/23 08:56 | 40mL/40mL               | 40mL/40mL                | 1.00              |

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

**Apex Laboratories, LLC**

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Project: **OCS**

Project Number: **461M114814.02**  
Project Manager: **Russ Bunker**

**Report ID:**

**A3G1248 - 07 31 23 1914**

## QUALIFIER DEFINITIONS

### Client Sample and Quality Control (QC) Sample Qualifier Definitions:

#### Apex Laboratories

- E** Estimated Value. The result is above the calibration range of the instrument.
- H-04** Insufficient preservative to reduce the sample pH to less than 2. Sample was analyzed within 14 days of sampling, but beyond the 7 days recommended for nonpreserved VOAs.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +11%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
- V-01** Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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Project: **OCS**  
Project Number: **461M114814.02**  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3G1248 - 07 31 23 1914**

### REPORTING NOTES AND CONVENTIONS:

#### Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.  
ND Analyte NOT DETECTED at or above the detection or reporting limit.  
NR Result Not Reported  
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

#### Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).  
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

#### Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

#### Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")  
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

#### QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

#### Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" \*\*\* " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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Project: **OCS**

Project Number: **461M114814.02**

Project Manager: **Russ Bunker**

**Report ID:**

**A3G1248 - 07 31 23 1914**

### REPORTING NOTES AND CONVENTIONS (Cont.):

#### **Blanks:**

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to  $\frac{1}{2}$  the Reporting Limit (RL).

-For Blank hits falling between  $\frac{1}{2}$  the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

#### **Preparation Notes:**

##### **Mixed Matrix Samples:**

##### **Water Samples:**

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

##### **Soil and Sediment Samples:**

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

#### **Sampling and Preservation Notes:**

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg, Lab Director

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Project: **OCS**  
Project Number: **461M114814.02**  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3G1248 - 07 31 23 1914**

### LABORATORY ACCREDITATION INFORMATION

**ORELAP Certification ID: OR100062 (Primary Accreditation)** -  
**EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

#### **Apex Laboratories**

| Matrix                                                                                | Analysis | TNI_ID | Analyte | TNI_ID | Accreditation |
|---------------------------------------------------------------------------------------|----------|--------|---------|--------|---------------|
| <u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u> |          |        |         |        |               |

#### **Secondary Accreditations**

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

#### **Subcontract Laboratory Accreditations**

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.  
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

#### **Field Testing Parameters**

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114814.02

Project Manager: Russ Bunker

Report ID:

A3G1248 - 07 31 23 1914

## APEX LABS COOLER RECEIPT FORM

Client: WSP Element WO#: A3 61248

Project/Project #: OCS (on container) 461M114814.02

## Delivery Info:

Date/time received: 7-18-23 @ 908 By: DJJ

Delivered by: Apex Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other

Cooler Inspection Date/time inspected: 7-18-23 @ 911 By: DJJ

Chain of Custody included? Yes ☒ NoSigned/dated by client? Yes ☒ No

|                            | Cooler #1 | Cooler #2 | Cooler #3 | Cooler #4 | Cooler #5 | Cooler #6 | Cooler #7 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temperature (°C)           | 0.4       |           |           |           |           |           |           |
| Custody seals? (Y/N)       | N         |           |           |           |           |           |           |
| Received on ice? (Y/N)     | Y         |           |           |           |           |           |           |
| Temp. blanks? (Y/N)        | N         |           |           |           |           |           |           |
| Ice type: (Gel/Real/Other) | Real      |           |           |           |           |           |           |
| Condition (In/Out):        | In        |           |           |           |           |           |           |

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes ☒ NoOut of temperature samples form initiated? Yes ☒ No

Sample Inspection: Date/time inspected: 7/18/23 @ 1235 By: KJ

All samples intact? Yes ☒ No Comments:Bottle labels/COCs agree? Yes ☐ No ☒ Comments: after lab Time on label for MW17 reads 1330, LOC reads 13:30COC/container discrepancies form initiated? Yes ☐ NoContainers/volumes received appropriate for analysis? Yes ☐ No Comments:Do VOA vials have visible headspace? Yes ☒ No NA

Comments 3/5 on MW16, MW17

Water samples: pH checked: Yes ☒ No NA pH appropriate? Yes ☐ No ☒ NA

Comments: pH 7 on MW16, MW17.

Additional information: strong odor.

No Project name on col. conts. read OCS. acc 7/20/23

Labeled by:

Witness:

Cooler Inspected by:

Form Y-003 R-00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
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503-718-2323  
ORELAP ID: OR100062

Monday, August 21, 2023

Russ Bunker

WSP USA Environment & Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

RE: A3H0991 - OCS - [none]

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3H0991, which was received by the laboratory on 8/9/2023 at 1:55:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

| Cooler Receipt Information                                                                                    |     |      |
|---------------------------------------------------------------------------------------------------------------|-----|------|
| <u>Acceptable Receipt Temperature is &lt;6 degC (not frozen), or received on ice the same day as sampling</u> |     |      |
| (See Cooler Receipt Form for details)                                                                         |     |      |
| Default Cooler                                                                                                | 4.3 | degC |

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

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WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: [none]  
Project Manager: Russ Bunker

Report ID:  
A3H0991 - 08 21 23 1709

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

| Client Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|------------------|---------------|--------|----------------|----------------|
| MW18-20230809    | A3H0991-01    | Water  | 08/09/23 11:30 | 08/09/23 13:55 |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

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503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: [none]  
Project Manager: Russ Bunker**Report ID:**  
A3H0991 - 08 21 23 1709

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW18-20230809 (A3H0991-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23H0542</b> |             |       |
| Acetone                              | ND            | ---             | 20.0            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Acrylonitrile                        | ND            | ---             | 2.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Benzene                              | ND            | ---             | 0.200           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Bromobenzene                         | ND            | ---             | 0.500           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Bromochloromethane                   | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Bromodichloromethane                 | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Bromoform                            | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Bromomethane                         | ND            | ---             | 5.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 2-Butanone (MEK)                     | ND            | ---             | 10.0            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| n-Butylbenzene                       | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| sec-Butylbenzene                     | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| tert-Butylbenzene                    | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Carbon disulfide                     | ND            | ---             | 10.0            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Carbon tetrachloride                 | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Chlorobenzene                        | ND            | ---             | 0.500           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Chloroethane                         | ND            | ---             | 5.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Chloroform                           | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Chloromethane                        | ND            | ---             | 5.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 2-Chlorotoluene                      | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 4-Chlorotoluene                      | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Dibromochloromethane                 | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane          | ND            | ---             | 5.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)              | ND            | ---             | 0.500           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Dibromomethane                       | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,2-Dichlorobenzene                  | ND            | ---             | 0.500           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,3-Dichlorobenzene                  | ND            | ---             | 0.500           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,4-Dichlorobenzene                  | ND            | ---             | 0.500           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Dichlorodifluoromethane              | ND            | ---             | 1.00            | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,1-Dichloroethane                   | ND            | ---             | 0.400           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)             | ND            | ---             | 0.400           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 1,1-Dichloroethene                   | ND            | ---             | 0.400           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| cis-1,2-Dichloroethene               | 50.4          | ---             | 0.400           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| trans-1,2-Dichloroethene             | 3.43          | ---             | 0.400           | ug/L                 | 1        | 08/15/23 20:31        | EPA 8260D   |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|--------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| MW18-20230809 (A3H0991-01RE1)  |               |                 |                 | Matrix: Water |          | Batch: 23H0542 |             |       |
| 1,2-Dichloropropane            | ND            | ---             | 0.500           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,3-Dichloropropane            | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 2,2-Dichloropropane            | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,1-Dichloropropene            | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| cis-1,3-Dichloropropene        | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| trans-1,3-Dichloropropene      | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Ethylbenzene                   | ND            | ---             | 0.500           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Hexachlorobutadiene            | ND            | ---             | 5.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 2-Hexanone                     | ND            | ---             | 10.0            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Isopropylbenzene               | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 4-Isopropyltoluene             | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Methylene chloride             | ND            | ---             | 10.0            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MIBK)    | ND            | ---             | 10.0            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE) | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Naphthalene                    | ND            | ---             | 4.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| n-Propylbenzene                | ND            | ---             | 0.500           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Styrene                        | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane      | ND            | ---             | 0.400           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane      | ND            | ---             | 0.500           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Tetrachloroethene (PCE)        | ND            | ---             | 0.400           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Toluene                        | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene         | ND            | ---             | 2.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene         | ND            | ---             | 2.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,1,1-Trichloroethane          | ND            | ---             | 0.400           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,1,2-Trichloroethane          | ND            | ---             | 0.500           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Trichloroethene (TCE)          | 21.8          | ---             | 0.400           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Trichlorofluoromethane         | ND            | ---             | 2.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,2,3-Trichloropropane         | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,2,4-Trimethylbenzene         | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| 1,3,5-Trimethylbenzene         | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| Vinyl chloride                 | 0.210         | ---             | 0.200           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| m,p-Xylene                     | ND            | ---             | 1.00            | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |
| o-Xylene                       | ND            | ---             | 0.500           | ug/L          | 1        | 08/15/23 20:31 | EPA 8260D   |       |

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## ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**

Project Number: [none]

Project Manager: **Russ Bunker**

**Report ID:**

**A3H0991 - 08 21 23 1709**

### ANALYTICAL SAMPLE RESULTS

#### Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|---------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW18-20230809 (A3H0991-01RE1)</b>  |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23H0542</b> |             |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               |                 | Recovery: 96 %  | Limits: 80-120 %     | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| Toluene-d8 (Surr)                     |               |                 | 103 %           | 80-120 %             | 1        | 08/15/23 20:31        | EPA 8260D   |       |
| 4-Bromofluorobenzene (Surr)           |               |                 | 100 %           | 80-120 %             | 1        | 08/15/23 20:31        | EPA 8260D   |       |

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15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: [none]  
Project Manager: Russ Bunker

**Report ID:**  
A3H0991 - 08 21 23 1709

ANALYTICAL SAMPLE RESULTS

**Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C**

| Analyte                           | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|-----------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW18-20230809 (A3H0991-01)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23H0505</b> |             |       |
| Total Organic Carbon              | 1.59          | ---             | 1.00            | mg/L                 | 1        | 08/15/23 12:05        | SM 5310 C   |       |

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Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23H0501-BLK1)        |        |                 | Prepared: 08/14/23 10:22 |       | Analyzed: 08/14/23 12:58 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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Philip Nerenberg, Lab Director



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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23H0501-BLK1)             |        |                 | Prepared: 08/14/23 10:22 |                  | Analyzed: 08/14/23 12:58 |              |               |       |              |     |           |       |
| 1,2-Dichloropropane              | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene        | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                     | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene              | ND     | ---             | 5.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                       | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                 | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene               | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride               | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)      | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)   | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                      | ND     | ---             | 4.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                  | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Styrene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane        | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane        | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)          | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Toluene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane            | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                   | ND     | ---             | 0.200                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                       | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                         | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |

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Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes  |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|--------|
| Batch 23H0501 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |        |
| Blank (23H0501-BLK1)        |        |                 | Prepared: 08/14/23 10:22 |                  | Analyzed: 08/14/23 12:58 |              |               |       |              |     |           |        |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 103 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |        |
| 4-Bromofluorobenzene (Surr) |        | 104 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |        |
| LCS (23H0501-BS1)           |        |                 | Prepared: 08/14/23 10:22 |                  | Analyzed: 08/14/23 12:04 |              |               |       |              |     |           |        |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |        |
| Acetone                     | 39.0   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 98    | 80-120%      | --- | ---       | Q-56   |
| Acrylonitrile               | 20.6   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |        |
| Benzene                     | 19.7   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |        |
| Bromobenzene                | 18.3   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |        |
| Bromochloromethane          | 20.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       | ICV-01 |
| Bromodichloromethane        | 19.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |        |
| Bromoform                   | 17.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 87    | 80-120%      | --- | ---       |        |
| Bromomethane                | 25.6   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 128   | 80-120%      | --- | ---       |        |
| 2-Butanone (MEK)            | 43.8   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 109   | 80-120%      | --- | ---       |        |
| n-Butylbenzene              | 19.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |        |
| sec-Butylbenzene            | 18.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |        |
| tert-Butylbenzene           | 18.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |        |
| Carbon disulfide            | 18.0   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |        |
| Carbon tetrachloride        | 18.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |        |
| Chlorobenzene               | 19.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |        |
| Chloroethane                | 19.8   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |        |
| Chloroform                  | 20.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |        |
| Chloromethane               | 23.0   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |        |
| 2-Chlorotoluene             | 18.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |        |
| 4-Chlorotoluene             | 19.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |        |
| Dibromochloromethane        | 19.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |        |
| 1,2-Dibromo-3-chloropropane | 18.4   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |        |
| 1,2-Dibromoethane (EDB)     | 18.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |        |
| Dibromomethane              | 19.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |        |
| 1,2-Dichlorobenzene         | 19.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |        |
| 1,3-Dichlorobenzene         | 19.1   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |        |
| 1,4-Dichlorobenzene         | 19.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |        |
| Dichlorodifluoromethane     | 19.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |        |
| 1,1-Dichloroethane          | 20.1   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |        |

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**

Project Number: [none]

Project Manager: Russ Bunker

**Report ID:**

A3H0991 - 08 21 23 1709

**QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| LCS (23H0501-BS1)              |        |                 | Prepared: 08/14/23 10:22 |       | Analyzed: 08/14/23 12:04 |              |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 20.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 19.4   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 19.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 19.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 19.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 19.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 19.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 19.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 20.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 19.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 19.4   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 40.5   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 17.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 18.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| Methylene chloride             | 21.2   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 40.0   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 17.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 88    | 80-120%      | --- | ---       |       |
| Naphthalene                    | 16.4   | ---             | 4.00                     | ug/L  | 1                        | 20.0         | ---           | 82    | 80-120%      | --- | ---       |       |
| n-Propylbenzene                | 19.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| Styrene                        | 18.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 19.4   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 22.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 18.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| Toluene                        | 19.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 17.9   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 18.6   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 18.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 19.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 17.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 23.9   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 120   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichloropropane         | 21.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 19.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 19.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |

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## ANALYTICAL REPORT

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ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount             | Source Result | % REC                    | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------------------|---------------|--------------------------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C              |        |                 |                          |                  |                          | Water                    |               |                          |              |     |           |       |
| LCS (23H0501-BS1)                      |        |                 | Prepared: 08/14/23 10:22 |                  | Analyzed: 08/14/23 12:04 |                          |               |                          |              |     |           |       |
| Vinyl chloride                         | 20.4   | ---             | 0.200                    | ug/L             | 1                        | 20.0                     | ---           | 102                      | 80-120%      | --- | ---       |       |
| m,p-Xylene                             | 39.1   | ---             | 1.00                     | ug/L             | 1                        | 40.0                     | ---           | 98                       | 80-120%      | --- | ---       |       |
| o-Xylene                               | 18.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0                     | ---           | 92                       | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x             |               |                          |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 100 %           |                          | 80-120 %         |                          | "                        |               |                          |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 94 %            |                          | 80-120 %         |                          | "                        |               |                          |              |     |           |       |
| Duplicate (23H0501-DUP1)               |        |                 |                          |                  |                          | Prepared: 08/14/23 10:22 |               | Analyzed: 08/14/23 23:59 |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1006-07) |        |                 |                          |                  |                          |                          |               |                          |              |     |           |       |
| Acetone                                | ND     | ---             | 200                      | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       | R-02  |
| Acrylonitrile                          | ND     | ---             | 30.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Benzene                                | 182    | ---             | 2.00                     | ug/L             | 10                       | ---                      | 173           | ---                      | ---          | 5   | 30%       |       |
| Bromobenzene                           | ND     | ---             | 5.00                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromochloromethane                     | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromodichloromethane                   | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromoform                              | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Bromomethane                           | ND     | ---             | 50.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 2-Butanone (MEK)                       | ND     | ---             | 100                      | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| n-Butylbenzene                         | 13.8   | ---             | 10.0                     | ug/L             | 10                       | ---                      | 13.0          | ---                      | ---          | 6   | 30%       |       |
| sec-Butylbenzene                       | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | 8.40          | ---                      | ---          | *** | 30%       |       |
| tert-Butylbenzene                      | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Carbon disulfide                       | ND     | ---             | 100                      | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Carbon tetrachloride                   | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chlorobenzene                          | ND     | ---             | 5.00                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chloroethane                           | ND     | ---             | 100                      | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chloroform                             | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Chloromethane                          | ND     | ---             | 50.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 2-Chlorotoluene                        | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 4-Chlorotoluene                        | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Dibromochloromethane                   | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane            | ND     | ---             | 50.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                | ND     | ---             | 5.00                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| Dibromomethane                         | ND     | ---             | 10.0                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                    | ND     | ---             | 5.00                     | ug/L             | 10                       | ---                      | ND            | ---                      | ---          | --- | 30%       |       |

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C              |        |                 |                                                     |       |          | Water        |               |       |              |     |           |       |
| Duplicate (23H0501-DUP1)               |        |                 | Prepared: 08/14/23 10:22   Analyzed: 08/14/23 23:59 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1006-07) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 5.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 5.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 5.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | 1800   | ---             | 5.00                                                | ug/L  | 10       | ---          | 1720          | ---   | ---          | 5   | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 50.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 100                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | 64.0   | ---             | 10.0                                                | ug/L  | 10       | ---          | 59.5          | ---   | ---          | 7   | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 100                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 100                                                 | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | 483    | ---             | 40.0                                                | ug/L  | 10       | ---          | 468           | ---   | ---          | 3   | 30%       |       |
| n-Propylbenzene                        | 173    | ---             | 5.00                                                | ug/L  | 10       | ---          | 164           | ---   | ---          | 6   | 30%       |       |
| Styrene                                | ND     | ---             | 10.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 5.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | 21.4   | ---             | 10.0                                                | ug/L  | 10       | ---          | 20.7          | ---   | ---          | 3   | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 20.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 20.0                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 4.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 5.00                                                | ug/L  | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C              |        |                 |                                                     |                  |          | Water        |               |       |              |     |           |       |
| Duplicate (23H0501-DUP1)               |        |                 | Prepared: 08/14/23 10:22   Analyzed: 08/14/23 23:59 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1006-07) |        |                 |                                                     |                  |          |              |               |       |              |     |           |       |
| Trichloroethene (TCE)                  | ND     | ---             | 4.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 20.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | 25.3   | ---             | 10.0                                                | ug/L             | 10       | ---          | 23.8          | ---   | ---          | 6   | 30%       |       |
| 1,3,5-Trimethylbenzene                 | 18.5   | ---             | 10.0                                                | ug/L             | 10       | ---          | 18.2          | ---   | ---          | 2   | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 2.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | 146    | ---             | 10.0                                                | ug/L             | 10       | ---          | 143           | ---   | ---          | 2   | 30%       |       |
| o-Xylene                               | 26.2   | ---             | 5.00                                                | ug/L             | 10       | ---          | 25.3          | ---   | ---          | 3   | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                                                     | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 100 %           |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 96 %            |                                                     | 80-120 %         |          | "            |               |       |              |     |           |       |

| Duplicate (23H0501-DUP2)                     |    |     | Prepared: 08/14/23 10:22    Analyzed: 08/15/23 00:26 |      |   |     |    |     |     |     | T-02 |
|----------------------------------------------|----|-----|------------------------------------------------------|------|---|-----|----|-----|-----|-----|------|
| QC Source Sample: MW18-20230809 (A3H0991-01) |    |     |                                                      |      |   |     |    |     |     |     |      |
| EPA 8260D                                    |    |     |                                                      |      |   |     |    |     |     |     |      |
| Acetone                                      | ND | --- | 100                                                  | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Acrylonitrile                                | ND | --- | 10.0                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Benzene                                      | ND | --- | 1.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Bromobenzene                                 | ND | --- | 2.50                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Bromochloromethane                           | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Bromodichloromethane                         | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Bromoform                                    | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Bromomethane                                 | ND | --- | 25.0                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| 2-Butanone (MEK)                             | ND | --- | 50.0                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| n-Butylbenzene                               | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| sec-Butylbenzene                             | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| tert-Butylbenzene                            | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Carbon disulfide                             | ND | --- | 50.0                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Carbon tetrachloride                         | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Chlorobenzene                                | ND | --- | 2.50                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Chloroethane                                 | ND | --- | 50.0                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Chloroform                                   | ND | --- | 5.00                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |
| Chloromethane                                | ND | --- | 25.0                                                 | ug/L | 5 | --- | ND | --- | --- | --- | 30%  |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C                    |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23H0501-DUP2)                     |        |                 | Prepared: 08/14/23 10:22 |       | Analyzed: 08/15/23 00:26 |              | T-02          |       |              |     |           |       |
| QC Source Sample: MW18-20230809 (A3H0991-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 2-Chlorotoluene                              | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Chlorotoluene                              | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromochloromethane                         | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane                  | ND     | ---             | 25.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                      | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromomethane                               | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                          | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                          | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                          | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                      | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                           | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)                     | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                           | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                       | 42.8   | ---             | 2.00                     | ug/L  | 5                        | ---          | 43.0          | ---   | ---          | 0.5 | 30%       |       |
| trans-1,2-Dichloroethene                     | 2.85   | ---             | 2.00                     | ug/L  | 5                        | ---          | 2.90          | ---   | ---          | 2   | 30%       |       |
| 1,2-Dichloropropane                          | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                          | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                          | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                          | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                      | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene                    | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                                 | 5.75   | ---             | 2.50                     | ug/L  | 5                        | ---          | 4.70          | ---   | ---          | 20  | 30%       |       |
| Hexachlorobutadiene                          | ND     | ---             | 25.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                                   | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                             | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                           | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                           | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)                  | ND     | ---             | 50.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)               | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                                  | ND     | ---             | 20.0                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                              | ND     | ---             | 2.50                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                      | ND     | ---             | 5.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane                    | ND     | ---             | 2.00                     | ug/L  | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0501 - EPA 5030C                    |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Duplicate (23H0501-DUP2)                     |        |                 | Prepared: 08/14/23 10:22 |                  | Analyzed: 08/15/23 00:26 |              | T-02          |       |              |     |           |       |
| QC Source Sample: MW18-20230809 (A3H0991-01) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,1,2,2-Tetrachloroethane                    | ND     | ---             | 2.50                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                      | ND     | ---             | 2.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                      | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                       | ND     | ---             | 10.0                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                       | ND     | ---             | 10.0                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                        | ND     | ---             | 2.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                        | ND     | ---             | 2.50                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichloroethene (TCE)                        | 20.6   | ---             | 2.00                     | ug/L             | 5                        | ---          | 21.2          | ---   | ---          | 3   | 30%       |       |
| Trichlorofluoromethane                       | ND     | ---             | 10.0                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                       | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                       | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                       | ND     | ---             | 5.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                               | ND     | ---             | 1.00                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                                   | ND     | ---             | 8.50                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       | R-06  |
| o-Xylene                                     | ND     | ---             | 2.50                     | ug/L             | 5                        | ---          | ND            | ---   | ---          | --- | 30%       | R-06  |
| Surr: 1,4-Difluorobenzene (Surr)             |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                            |        | 103 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)                  |        | 104 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Matrix Spike (23H0501-MS1)

Prepared: 08/14/23 10:22 Analyzed: 08/14/23 21:17

QC Source Sample: Non-SDG (A3H0986-10)

## EPA 8260D

|                      |      |     |       |      |   |      |       |     |         |     |     |       |
|----------------------|------|-----|-------|------|---|------|-------|-----|---------|-----|-----|-------|
| Acetone              | 52.4 | --- | 20.0  | ug/L | 1 | 40.0 | ND    | 96  | 39-160% | --- | --- |       |
| Acrylonitrile        | 20.1 | --- | 2.00  | ug/L | 1 | 20.0 | ND    | 100 | 63-135% | --- | --- |       |
| Benzene              | 20.2 | --- | 0.200 | ug/L | 1 | 20.0 | 0.110 | 100 | 79-120% | --- | --- |       |
| Bromobenzene         | 18.4 | --- | 0.500 | ug/L | 1 | 20.0 | ND    | 92  | 80-120% | --- | --- |       |
| Bromochloromethane   | 20.0 | --- | 1.00  | ug/L | 1 | 20.0 | ND    | 100 | 78-123% | --- | --- |       |
| Bromodichloromethane | 19.2 | --- | 1.00  | ug/L | 1 | 20.0 | ND    | 96  | 79-125% | --- | --- |       |
| Bromoform            | 16.2 | --- | 1.00  | ug/L | 1 | 20.0 | ND    | 81  | 66-130% | --- | --- |       |
| Bromomethane         | 26.2 | --- | 5.00  | ug/L | 1 | 20.0 | ND    | 131 | 53-141% | --- | --- | Q-54a |
| 2-Butanone (MEK)     | 43.1 | --- | 10.0  | ug/L | 1 | 40.0 | ND    | 108 | 56-143% | --- | --- |       |
| n-Butylbenzene       | 19.0 | --- | 1.00  | ug/L | 1 | 20.0 | ND    | 95  | 75-128% | --- | --- |       |
| sec-Butylbenzene     | 18.9 | --- | 1.00  | ug/L | 1 | 20.0 | ND    | 95  | 77-126% | --- | --- |       |

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Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes  |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|--------|
| Batch 23H0501 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |        |
| Matrix Spike (23H0501-MS1)             |        |                 | Prepared: 08/14/23 10:22 |       | Analyzed: 08/14/23 21:17 |              |               |       |              |     |           |        |
| QC Source Sample: Non-SDG (A3H0986-10) |        |                 |                          |       |                          |              |               |       |              |     |           |        |
| tert-Butylbenzene                      | 18.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 94    | 78-124%      | --- | ---       | ICV-01 |
| Carbon disulfide                       | 18.0   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 90    | 64-133%      | --- | ---       |        |
| Carbon tetrachloride                   | 20.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 101   | 72-136%      | --- | ---       |        |
| Chlorobenzene                          | 19.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 95    | 80-120%      | --- | ---       |        |
| Chloroethane                           | 21.2   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 106   | 60-138%      | --- | ---       |        |
| Chloroform                             | 20.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 101   | 79-124%      | --- | ---       |        |
| Chloromethane                          | 22.3   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 112   | 50-139%      | --- | ---       |        |
| 2-Chlorotoluene                        | 18.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 91    | 79-122%      | --- | ---       |        |
| 4-Chlorotoluene                        | 18.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 93    | 78-122%      | --- | ---       |        |
| Dibromochloromethane                   | 18.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 91    | 74-126%      | --- | ---       |        |
| 1,2-Dibromo-3-chloropropane            | 17.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 88    | 62-128%      | --- | ---       |        |
| 1,2-Dibromoethane (EDB)                | 19.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 95    | 77-121%      | --- | ---       |        |
| Dibromomethane                         | 19.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 96    | 79-123%      | --- | ---       |        |
| 1,2-Dichlorobenzene                    | 19.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 99    | 80-120%      | --- | ---       |        |
| 1,3-Dichlorobenzene                    | 18.5   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 93    | 80-120%      | --- | ---       |        |
| 1,4-Dichlorobenzene                    | 19.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 96    | 79-120%      | --- | ---       |        |
| Dichlorodifluoromethane                | 22.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 113   | 32-152%      | --- | ---       |        |
| 1,1-Dichloroethane                     | 20.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 102   | 77-125%      | --- | ---       |        |
| 1,2-Dichloroethane (EDC)               | 20.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 101   | 73-128%      | --- | ---       |        |
| 1,1-Dichloroethene                     | 21.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 107   | 71-131%      | --- | ---       |        |
| cis-1,2-Dichloroethene                 | 20.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 101   | 78-123%      | --- | ---       |        |
| trans-1,2-Dichloroethene               | 20.4   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 102   | 75-124%      | --- | ---       |        |
| 1,2-Dichloropropane                    | 19.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 98    | 78-122%      | --- | ---       |        |
| 1,3-Dichloropropane                    | 19.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 96    | 80-120%      | --- | ---       |        |
| 2,2-Dichloropropane                    | 17.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 88    | 60-139%      | --- | ---       |        |
| 1,1-Dichloropropene                    | 21.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 79-125%      | --- | ---       |        |
| cis-1,3-Dichloropropene                | 17.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 89    | 75-124%      | --- | ---       |        |
| trans-1,3-Dichloropropene              | 19.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 97    | 73-127%      | --- | ---       |        |
| Ethylbenzene                           | 21.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 2.79          | 95    | 79-121%      | --- | ---       |        |
| Hexachlorobutadiene                    | 17.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 89    | 66-134%      | --- | ---       |        |
| 2-Hexanone                             | 39.8   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 100   | 57-139%      | --- | ---       |        |
| Isopropylbenzene                       | 19.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 96    | 72-131%      | --- | ---       |        |
| 4-Isopropyltoluene                     | 18.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 93    | 77-127%      | --- | ---       |        |

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Philip Nerenberg, Lab Director

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Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |  |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|--|
| Batch 23H0501 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |  |
| Matrix Spike (23H0501-MS1)             |        |                 | Prepared: 08/14/23 10:22 |                  | Analyzed: 08/14/23 21:17 |              |               |       |              |     |           |       |  |
| QC Source Sample: Non-SDG (A3H0986-10) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |  |
| Methylene chloride                     | 20.4   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ND            | 102   | 74-124%      | --- | ---       | Q-01  |  |
| 4-Methyl-2-pentanone (MiBK)            | 39.2   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ND            | 98    | 67-130%      | --- | ---       |       |  |
| Methyl tert-butyl ether (MTBE)         | 17.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 89    | 71-124%      | --- | ---       |       |  |
| Naphthalene                            | 16.3   | ---             | 4.00                     | ug/L             | 1                        | 20.0         | ND            | 82    | 61-128%      | --- | ---       |       |  |
| n-Propylbenzene                        | 19.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 98    | 76-126%      | --- | ---       |       |  |
| Styrene                                | 12.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 64    | 78-123%      | --- | ---       |       |  |
| 1,1,1,2-Tetrachloroethane              | 18.9   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 94    | 78-124%      | --- | ---       |       |  |
| 1,1,2,2-Tetrachloroethane              | 21.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 108   | 71-121%      | --- | ---       |       |  |
| Tetrachloroethene (PCE)                | 19.8   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 99    | 74-129%      | --- | ---       |       |  |
| Toluene                                | 19.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 99    | 80-121%      | --- | ---       |       |  |
| 1,2,3-Trichlorobenzene                 | 16.8   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 84    | 69-129%      | --- | ---       |       |  |
| 1,2,4-Trichlorobenzene                 | 17.6   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 88    | 69-130%      | --- | ---       |       |  |
| 1,1,1-Trichloroethane                  | 20.6   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 103   | 74-131%      | --- | ---       |       |  |
| 1,1,2-Trichloroethane                  | 18.8   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 94    | 80-120%      | --- | ---       |       |  |
| Trichloroethene (TCE)                  | 19.0   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 95    | 79-123%      | --- | ---       |       |  |
| Trichlorofluoromethane                 | 26.2   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 131   | 65-141%      | --- | ---       |       |  |
| 1,2,3-Trichloropropane                 | 20.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 103   | 73-122%      | --- | ---       |       |  |
| 1,2,4-Trimethylbenzene                 | 17.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | 0.950         | 85    | 76-124%      | --- | ---       |       |  |
| 1,3,5-Trimethylbenzene                 | 18.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 93    | 75-124%      | --- | ---       |       |  |
| Vinyl chloride                         | 22.5   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ND            | 113   | 58-137%      | --- | ---       |       |  |
| m,p-Xylene                             | 47.2   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | 8.77          | 96    | 80-121%      | --- | ---       |       |  |
| o-Xylene                               | 20.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | 1.64          | 94    | 78-122%      | --- | ---       |       |  |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |  |
| Toluene-d8 (Surr)                      |        | 98 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |  |
| 4-Bromofluorobenzene (Surr)            |        | 96 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |  |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23H0542-BLK1)        |        |                 | Prepared: 08/15/23 10:05 |       | Analyzed: 08/15/23 18:15 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23H0542-BLK1)             |        |                 | Prepared: 08/15/23 10:05 |                  | Analyzed: 08/15/23 18:15 |              |               |       |              |     |           |       |
| 1,2-Dichloropropane              | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene              | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene        | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                     | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene              | ND     | ---             | 5.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                       | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                 | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene               | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride               | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)      | ND     | ---             | 10.0                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)   | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                      | ND     | ---             | 4.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                  | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Styrene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane        | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane        | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)          | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Toluene                          | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane            | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)            | ND     | ---             | 0.400                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane           | ND     | ---             | 2.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene           | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                   | ND     | ---             | 0.200                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                       | ND     | ---             | 1.00                     | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                         | ND     | ---             | 0.500                    | ug/L             | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 98 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23H0542-BLK1)        |        |                 | Prepared: 08/15/23 10:05 |                  | Analyzed: 08/15/23 18:15 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 103 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23H0542-BS1)           |        |                 | Prepared: 08/15/23 10:05 |                  | Analyzed: 08/15/23 17:30 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 38.5   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 96    | 80-120%      | --- | ---       | Q-56  |
| Acrylonitrile               | 20.8   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Benzene                     | 20.1   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 20.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 20.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 21.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Bromoform                   | 23.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 119   | 80-120%      | --- | ---       |       |
| Bromomethane                | 27.7   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 138   | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)            | 40.6   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 23.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 22.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 22.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 20.8   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 22.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 21.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Chloroethane                | 20.3   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Chloroform                  | 20.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Chloromethane               | 16.3   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 81    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene             | 21.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 21.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 22.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 22.3   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 22.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| Dibromomethane              | 20.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 22.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 21.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 21.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 21.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane          | 21.0   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |

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Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| LCS (23H0542-BS1)              |        |                 | Prepared: 08/15/23 10:05 |       | Analyzed: 08/15/23 17:30 |              |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 21.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 20.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 20.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 20.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 20.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 21.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 22.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 20.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 22.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 22.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 21.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 22.4   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 42.1   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 22.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 23.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| Methylene chloride             | 20.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 43.5   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 21.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 22.5   | ---             | 4.00                     | ug/L  | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| n-Propylbenzene                | 21.9   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Styrene                        | 23.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 115   | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 20.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 22.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Toluene                        | 20.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 22.0   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 22.3   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 21.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 20.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 20.9   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 22.0   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichloropropane         | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 22.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23H0542-BS1)                |        |                 | Prepared: 08/15/23 10:05 |                  | Analyzed: 08/15/23 17:30 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 19.8   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 44.8   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 22.1   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 98 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 100 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23H0542-DUP1)

Prepared: 08/15/23 10:05 Analyzed: 08/16/23 02:09

## QC Source Sample: Non-SDG (A3H1055-15)

|                             |    |     |      |      |    |     |      |     |     |     |     |
|-----------------------------|----|-----|------|------|----|-----|------|-----|-----|-----|-----|
| Acetone                     | ND | --- | 200  | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Acrylonitrile               | ND | --- | 20.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Benzene                     | ND | --- | 2.00 | ug/L | 10 | --- | 1.50 | --- | --- | *** | 30% |
| Bromobenzene                | ND | --- | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromochloromethane          | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromoform                   | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Bromomethane                | ND | --- | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | --- | 100  | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Carbon disulfide            | ND | --- | 100  | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chlorobenzene               | ND | --- | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chloroethane                | ND | --- | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chloroform                  | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Chloromethane               | ND | --- | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | --- | 50.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | --- | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| Dibromomethane              | ND | --- | 10.0 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND | --- | 5.00 | ug/L | 10 | --- | ND   | --- | --- | --- | 30% |

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Philip Nerenberg, Lab Director



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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23H0542-DUP1)               |        |                 | Prepared: 08/15/23 10:05 |       | Analyzed: 08/16/23 02:09 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1055-15) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | 4.60          | ---   | ---          | *** | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 50.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | ---             | 40.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 20.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 20.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units            | Dilution | Spike Amount | Source Result | % REC | Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|------------------|----------|--------------|---------------|-------|--------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C              |        |                 |                                                     |                  |          | Water        |               |       |        |     |           |       |
| Duplicate (23H0542-DUP1)               |        |                 | Prepared: 08/15/23 10:05   Analyzed: 08/16/23 02:09 |                  |          |              |               |       |        |     |           |       |
| QC Source Sample: Non-SDG (A3H1055-15) |        |                 |                                                     |                  |          |              |               |       |        |     |           |       |
| Trichloroethene (TCE)                  | ND     | ---             | 4.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 20.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 2.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| m,p-Xylene                             | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| o-Xylene                               | ND     | ---             | 5.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                                                     | Limits: 80-120 % |          | Dilution: 1x |               |       |        |     |           |       |
| Toluene-d8 (Surr)                      |        | 102 %           |                                                     | 80-120 %         |          | "            |               |       |        |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 99 %            |                                                     | 80-120 %         |          | "            |               |       |        |     |           |       |
| Duplicate (23H0542-DUP2)               |        |                 | Prepared: 08/15/23 10:05   Analyzed: 08/16/23 02:54 |                  |          |              |               |       |        |     |           |       |
| QC Source Sample: Non-SDG (A3H1055-21) |        |                 |                                                     |                  |          |              |               |       |        |     |           |       |
| Acetone                                | ND     | ---             | 200                                                 | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Acrylonitrile                          | ND     | ---             | 20.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Benzene                                | 17.1   | ---             | 2.00                                                | ug/L             | 10       | ---          | 16.2          | ---   | ---    | 5   | 30%       |       |
| Bromobenzene                           | ND     | ---             | 5.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromochloromethane                     | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromodichloromethane                   | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromoform                              | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Bromomethane                           | ND     | ---             | 50.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 2-Butanone (MEK)                       | ND     | ---             | 100                                                 | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| n-Butylbenzene                         | 25.0   | ---             | 10.0                                                | ug/L             | 10       | ---          | 22.0          | ---   | ---    | 13  | 30%       | M-02  |
| sec-Butylbenzene                       | 26.2   | ---             | 10.0                                                | ug/L             | 10       | ---          | 23.9          | ---   | ---    | 9   | 30%       |       |
| tert-Butylbenzene                      | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Carbon disulfide                       | ND     | ---             | 100                                                 | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Carbon tetrachloride                   | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chlorobenzene                          | ND     | ---             | 5.00                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chloroethane                           | ND     | ---             | 50.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chloroform                             | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| Chloromethane                          | ND     | ---             | 50.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |
| 2-Chlorotoluene                        | ND     | ---             | 10.0                                                | ug/L             | 10       | ---          | ND            | ---   | ---    | --- | 30%       |       |

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A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23H0542-DUP2)               |        |                 | Prepared: 08/15/23 10:05 |       | Analyzed: 08/16/23 02:54 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1055-21) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 4-Chlorotoluene                        | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       | M-02  |
| Dibromochloromethane                   | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromo-3-chloropropane            | ND     | ---             | 50.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromomethane                         | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | 42.8   | ---             | 5.00                     | ug/L  | 10                       | ---          | 41.1          | ---   | ---          | 4   | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 50.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | 27.3   | ---             | 10.0                     | ug/L  | 10                       | ---          | 25.4          | ---   | ---          | 7   | 30%       |       |
| 4-Isopropyltoluene                     | 15.2   | ---             | 10.0                     | ug/L  | 10                       | ---          | 13.3          | ---   | ---          | 13  | 30%       |       |
| Methylene chloride                     | ND     | ---             | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 100                      | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | 181    | ---             | 40.0                     | ug/L  | 10                       | ---          | 176           | ---   | ---          | 3   | 30%       |       |
| n-Propylbenzene                        | 43.1   | ---             | 5.00                     | ug/L  | 10                       | ---          | 41.2          | ---   | ---          | 5   | 30%       |       |
| Styrene                                | ND     | ---             | 10.0                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 4.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 5.00                     | ug/L  | 10                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units            | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|------------------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C              |        |                 |                                                      |                  |          | Water        |               |       |              |     |           |       |
| Duplicate (23H0542-DUP2)               |        |                 | Prepared: 08/15/23 10:05    Analyzed: 08/16/23 02:54 |                  |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1055-21) |        |                 |                                                      |                  |          |              |               |       |              |     |           |       |
| Tetrachloroethene (PCE)                | ND     | ---             | 4.00                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | ND     | ---             | 10.0                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 20.0                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 20.0                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 4.00                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 5.00                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichloroethene (TCE)                  | ND     | ---             | 4.00                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 20.0                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 10.0                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | 193    | ---             | 10.0                                                 | ug/L             | 10       | ---          | 184           | ---   | ---          | 5   | 30%       |       |
| 1,3,5-Trimethylbenzene                 | 35.0   | ---             | 10.0                                                 | ug/L             | 10       | ---          | 32.0          | ---   | ---          | 9   | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 2.00                                                 | ug/L             | 10       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | 17.7   | ---             | 10.0                                                 | ug/L             | 10       | ---          | 17.1          | ---   | ---          | 3   | 30%       |       |
| o-Xylene                               | ND     | ---             | 5.00                                                 | ug/L             | 10       | ---          | 2.70          | ---   | ---          | *** | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 106 % |                                                      | Limits: 80-120 % |          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 103 %           |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 99 %            |                                                      | 80-120 %         |          | "            |               |       |              |     |           |       |

## Matrix Spike (23H0542-MS1)

Prepared: 08/15/23 10:05 Analyzed: 08/16/23 04:25

## QC Source Sample: Non-SDG (A3H1079-01)

|                      |      |     |       |      |   |      |     |     |         |     |     |         |
|----------------------|------|-----|-------|------|---|------|-----|-----|---------|-----|-----|---------|
| EPA 8260D            |      |     |       |      |   |      |     |     |         |     |     |         |
| Acetone              | 505  | --- | 20.0  | ug/L | 1 | 40.0 | 338 | 418 | 39-160% | --- | --- | E, Q-03 |
| Acrylonitrile        | 22.6 | --- | 2.00  | ug/L | 1 | 20.0 | ND  | 113 | 63-135% | --- | --- |         |
| Benzene              | 24.1 | --- | 0.200 | ug/L | 1 | 20.0 | ND  | 120 | 79-120% | --- | --- |         |
| Bromobenzene         | 21.4 | --- | 0.500 | ug/L | 1 | 20.0 | ND  | 107 | 80-120% | --- | --- |         |
| Bromochloromethane   | 23.2 | --- | 1.00  | ug/L | 1 | 20.0 | ND  | 116 | 78-123% | --- | --- |         |
| Bromodichloromethane | 21.4 | --- | 1.00  | ug/L | 1 | 20.0 | ND  | 107 | 79-125% | --- | --- |         |
| Bromoform            | 19.9 | --- | 1.00  | ug/L | 1 | 20.0 | ND  | 99  | 66-130% | --- | --- |         |
| Bromomethane         | 27.2 | --- | 5.00  | ug/L | 1 | 20.0 | ND  | 136 | 53-141% | --- | --- | Q-54    |
| 2-Butanone (MEK)     | 30.5 | --- | 10.0  | ug/L | 1 | 40.0 | ND  | 76  | 56-143% | --- | --- |         |
| n-Butylbenzene       | 23.4 | --- | 1.00  | ug/L | 1 | 20.0 | ND  | 117 | 75-128% | --- | --- |         |
| sec-Butylbenzene     | 23.1 | --- | 1.00  | ug/L | 1 | 20.0 | ND  | 116 | 77-126% | --- | --- |         |
| tert-Butylbenzene    | 21.7 | --- | 1.00  | ug/L | 1 | 20.0 | ND  | 109 | 78-124% | --- | --- |         |

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Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23H0542-MS1)             |        |                 | Prepared: 08/15/23 10:05 |       | Analyzed: 08/16/23 04:25 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1079-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Carbon disulfide                       | 25.7   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 128   | 64-133%      | --- | ---       |       |
| Carbon tetrachloride                   | 22.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 72-136%      | --- | ---       |       |
| Chlorobenzene                          | 21.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 108   | 80-120%      | --- | ---       |       |
| Chloroethane                           | 22.2   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 60-138%      | --- | ---       |       |
| Chloroform                             | 22.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 113   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 17.3   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 87    | 50-139%      | --- | ---       |       |
| 2-Chlorotoluene                        | 22.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 20.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 100   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 20.0   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 100   | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 21.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 107   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 22.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 22.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 111   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 22.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 110   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 21.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 105   | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 23.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 116   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 24.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 121   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 20.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 104   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 24.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 120   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 23.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 115   | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 24.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 121   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 23.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 117   | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 20.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 103   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 19.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 98    | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 23.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 119   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 20.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 103   | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 20.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 100   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 22.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 0.440         | 108   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 21.3   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 23.5   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 59    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 22.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 114   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 23.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 116   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 23.7   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 119   | 74-124%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0542 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23H0542-MS1)             |        |                 | Prepared: 08/15/23 10:05 |                  | Analyzed: 08/16/23 04:25 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3H1079-01) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 4-Methyl-2-pentanone (MiBK)            | 36.6   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ND            | 92    | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 22.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 110   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 22.8   | ---             | 4.00                     | ug/L             | 1                        | 20.0         | ND            | 114   | 61-128%      | --- | ---       |       |
| n-Propylbenzene                        | 22.3   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 112   | 76-126%      | --- | ---       |       |
| Styrene                                | 22.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 112   | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 19.1   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 96    | 78-124%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane              | 19.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 98    | 71-121%      | --- | ---       |       |
| Tetrachloroethene (PCE)                | 23.1   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 116   | 74-129%      | --- | ---       |       |
| Toluene                                | 21.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 110   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 21.6   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 108   | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 22.0   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 110   | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 22.0   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 110   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 20.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 104   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 24.2   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 121   | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 23.1   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 115   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 19.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 96    | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 22.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 112   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 22.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 112   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 25.3   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ND            | 126   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 44.3   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ND            | 111   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 21.8   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 109   | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 110 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 101 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave, Suite 150

Portland, OR 97224

Project: **OCS**

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23H0505 - Method Prep: Aq        |        |                 |                                                     |       |          | Water        |               |       |              |     |           |       |
| Blank (23H0505-BLK1)                   |        |                 | Prepared: 08/14/23 10:39   Analyzed: 08/14/23 21:16 |       |          |              |               |       |              |     |           |       |
| SM 5310 C                              |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                   | ND     | ---             | 1.00                                                | mg/L  | 1        | ---          | ---           | ---   | ---          | --- | ---       |       |
| LCS (23H0505-BS1)                      |        |                 | Prepared: 08/14/23 10:39   Analyzed: 08/14/23 21:46 |       |          |              |               |       |              |     |           |       |
| SM 5310 C                              |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                   | 10.1   | ---             | 1.00                                                | mg/L  | 1        | 10.0         | ---           | 101   | 90-114%      | --- | ---       |       |
| Matrix Spike (23H0505-MS1)             |        |                 | Prepared: 08/14/23 10:39   Analyzed: 08/15/23 00:50 |       |          |              |               |       |              |     |           | CONT  |
| QC Source Sample: Non-SDG (A3H0688-58) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| SM 5310 C                              |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                   | 10.4   | ---             | 1.01                                                | mg/L  | 1        | 10.0         | ND            | 104   | 85-115%      | --- | ---       |       |
| Matrix Spike (23H0505-MS2)             |        |                 | Prepared: 08/14/23 10:39   Analyzed: 08/15/23 09:00 |       |          |              |               |       |              |     |           | CONT  |
| QC Source Sample: Non-SDG (A3H0688-76) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| SM 5310 C                              |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                   | 15.0   | ---             | 1.01                                                | mg/L  | 1        | 10.0         | 4.75          | 103   | 85-115%      | --- | ---       |       |
| Matrix Spike Dup (23H0505-MSD1)        |        |                 | Prepared: 08/14/23 10:39   Analyzed: 08/15/23 01:20 |       |          |              |               |       |              |     |           | CONT  |
| QC Source Sample: Non-SDG (A3H0688-58) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                   | 10.3   | ---             | 1.01                                                | mg/L  | 1        | 10.0         | ND            | 103   | 85-115%      | 0.5 | 15%       |       |
| Matrix Spike Dup (23H0505-MSD2)        |        |                 | Prepared: 08/14/23 10:39   Analyzed: 08/15/23 09:30 |       |          |              |               |       |              |     |           | CONT  |
| QC Source Sample: Non-SDG (A3H0688-76) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                   | 15.1   | ---             | 1.01                                                | mg/L  | 1        | 10.0         | 4.75          | 104   | 85-115%      | 0.4 | 15%       |       |

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**

Project Number: [none]

Project Manager: **Russ Bunker****Report ID:****A3H0991 - 08 21 23 1709****SAMPLE PREPARATION INFORMATION****Volatile Organic Compounds by EPA 8260D**Prep: EPA 5030C

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23H0542</u> |        |           |                |                |                         |                          |                   |
| A3H0991-01RE1         | Water  | EPA 8260D | 08/09/23 11:30 | 08/15/23 17:30 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |

**Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C**Prep: Method Prep: Aq

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23H0505</u> |        |           |                |                |                         |                          |                   |
| A3H0991-01            | Water  | SM 5310 C | 08/09/23 11:30 | 08/14/23 10:39 | 40mL/40mL               | 40mL/40mL                | 1.00              |

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Project Number: [none]

Project Manager: **Russ Bunker**

**Report ID:**

**A3H0991 - 08 21 23 1709**

## QUALIFIER DEFINITIONS

### Client Sample and Quality Control (QC) Sample Qualifier Definitions:

#### Apex Laboratories

- CONT** The Sample Container provided for this analysis was not provided by Apex Laboratories, and has not been verified as part of the Apex Quality System.
- E** Estimated Value. The result is above the calibration range of the instrument.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +8%. The results are reported as Estimated Values.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-06** Reporting level raised due to possible carryover from a previous sample.
- T-02** This Batch QC sample was analyzed outside of the method specified 12 hour analysis window. Results are estimated.

Apex Laboratories

Philip Nerenberg, Lab Director

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Project: **OCS**  
Project Number: [none]  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3H0991 - 08 21 23 1709**

### REPORTING NOTES AND CONVENTIONS:

#### Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.  
ND Analyte NOT DETECTED at or above the detection or reporting limit.  
NR Result Not Reported  
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

#### Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).  
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

#### Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

#### Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")  
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

#### QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

#### Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" \*\*\* " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

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Philip Nerenberg, Lab Director



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15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: **OCS**  
Project Number: [none]  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3H0991 - 08 21 23 1709**

### REPORTING NOTES AND CONVENTIONS (Cont.):

#### Blanks:

- Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
- For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
  - For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
- For further details, please request a copy of this document.
- Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
- 'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

#### Preparation Notes:

##### Mixed Matrix Samples:

##### Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

##### Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

#### Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Philip Nerenberg, Lab Director



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15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: **OCS**  
Project Number: [none]  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3H0991 - 08 21 23 1709**

### LABORATORY ACCREDITATION INFORMATION

**ORELAP Certification ID: OR100062 (Primary Accreditation)** -  
**EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

#### **Apex Laboratories**

| Matrix                                                                                | Analysis | TNI_ID | Analyte | TNI_ID | Accreditation |
|---------------------------------------------------------------------------------------|----------|--------|---------|--------|---------------|
| <u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u> |          |        |         |        |               |

#### **Secondary Accreditations**

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

#### **Subcontract Laboratory Accreditations**

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.  
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

#### **Field Testing Parameters**

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave, Suite 150

Portland, OR 97224

Project: OCS

Project Number: [none]

Project Manager: Russ Bunker

Report ID:

A3H0991 - 08 21 23 1709

## APEX LABS COOLER RECEIPT FORM

Client: WSP Element WO#: A3 H0991

Project/Project #: OCS

## Delivery Info:

Date/time received: 8/9/23 @ 13:55 By: APW

Delivered by: Apex Client ☒ ESS FedEx UPS Radio Morgan SDS Evergreen Other

Cooler Inspection Date/time inspected: 8/9/23 @ 13:55 By: APW

Chain of Custody included? Yes ☒ NoSigned/dated by client? Yes ☒ No

|                  | Cooler #1 | Cooler #2 | Cooler #3 | Cooler #4 | Cooler #5 | Cooler #6 | Cooler #7 |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temperature (°C) | 4.3       |           |           |           |           |           |           |

Custody seals? (Y/N) N

Received on ice? (Y/N) Y

Temp. blanks? (Y/N) Y

Ice type: (Gel/Real/Other) Gel

Condition (In/Out): In

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 8/11/23 @ 9:16 By: APW

All samples intact? Yes ☒ No Comments:Bottle labels/COCs agree? Yes ☒ No ☒ Comments: TB provided, not on cool.COC/container discrepancies form initiated? Yes No ☒Containers/volumes received appropriate for analysis? Yes ☒ No Comments:Do VOA vials have visible headspace? Yes ☒ No NA

Comments TB# 3339 has HS

Water samples: pH checked: Yes ☒ No NA pH appropriate? Yes ☒ No NA

Comments:

Additional information: #3339

Labeled by: APW

Witness:

Cooler Inspected by: APW

Form Y-003 R-00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

Monday, November 6, 2023

Russ Bunker

WSP USA Environment & Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

RE: A3J1449 - OCS - 461M114811

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3J1449, which was received by the laboratory on 10/17/2023 at 2:52:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

| Cooler Receipt Information                                                                                                         |          |
|------------------------------------------------------------------------------------------------------------------------------------|----------|
| <u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u> |          |
| (See Cooler Receipt Form for details)                                                                                              |          |
| Default Cooler                                                                                                                     | 5.6 degC |

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

*Philip Nerenberg*

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 461M114811  
Project Manager: Russ Bunker

Report ID:  
A3J1449 - 11 06 23 1317

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

| Client Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|------------------|---------------|--------|----------------|----------------|
| MW16-20231017    | A3J1449-01    | Water  | 10/17/23 12:25 | 10/17/23 14:52 |
| MW17-20231017    | A3J1449-02    | Water  | 10/17/23 11:50 | 10/17/23 14:52 |
| MW18-20231017    | A3J1449-03    | Water  | 10/17/23 11:05 | 10/17/23 14:52 |
| MW19-20231017    | A3J1449-04    | Water  | 10/17/23 13:20 | 10/17/23 14:52 |
| RW1-20231017     | A3J1449-05    | Water  | 10/17/23 12:55 | 10/17/23 14:52 |
| Trip Blank       | A3J1449-06    | Water  | 10/17/23 00:00 | 10/17/23 14:52 |

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Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit | Reporting Limit | Units            | Dilution       | Date Analyzed  | Method Ref. | Notes |
|---------------------------------------|---------------|-----------------|-----------------|------------------|----------------|----------------|-------------|-------|
| MW16-20231017 (A3J1449-01)            |               | Matrix: Water   |                 |                  | Batch: 23J0824 |                | V-01        |       |
| Acetone                               | 1670          | ---             | 1000            | ug/L             | 50             | 10/21/23 12:28 | EPA 8260D   |       |
| 2-Butanone (MEK)                      | 3620          | ---             | 500             | ug/L             | 50             | 10/21/23 12:28 | EPA 8260D   |       |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 96 %  |                 | Limits: 80-120 % | 1              | 10/21/23 12:28 | EPA 8260D   |       |
| Toluene-d8 (Surr)                     |               | 101 %           |                 | 80-120 %         | 1              | 10/21/23 12:28 | EPA 8260D   |       |
| 4-Bromofluorobenzene (Surr)           |               | 98 %            |                 | 80-120 %         | 1              | 10/21/23 12:28 | EPA 8260D   |       |
| MW16-20231017 (A3J1449-01RE1)         |               | Matrix: Water   |                 |                  | Batch: 23J0862 |                | V-01        |       |
| Acrylonitrile                         | ND            | ---             | 20.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Benzene                               | ND            | ---             | 2.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Bromobenzene                          | ND            | ---             | 5.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Bromochloromethane                    | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Bromodichloromethane                  | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Bromoform                             | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Bromomethane                          | ND            | ---             | 50.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| n-Butylbenzene                        | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| sec-Butylbenzene                      | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| tert-Butylbenzene                     | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Carbon disulfide                      | ND            | ---             | 100             | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Carbon tetrachloride                  | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Chlorobenzene                         | ND            | ---             | 5.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Chloroethane                          | ND            | ---             | 50.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Chloroform                            | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Chloromethane                         | ND            | ---             | 50.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 2-Chlorotoluene                       | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 4-Chlorotoluene                       | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Dibromochloromethane                  | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane           | ND            | ---             | 50.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)               | ND            | ---             | 5.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Dibromomethane                        | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 1,2-Dichlorobenzene                   | ND            | ---             | 5.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 1,3-Dichlorobenzene                   | ND            | ---             | 5.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| 1,4-Dichlorobenzene                   | ND            | ---             | 5.00            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |
| Dichlorodifluoromethane               | ND            | ---             | 10.0            | ug/L             | 10             | 10/23/23 20:33 | EPA 8260D   |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3J1449 - 11 06 23 1317**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes       |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------------|
| <b>MW16-20231017 (A3J1449-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23J0862</b> |             | <b>V-01</b> |
| 1,1-Dichloroethane                   | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,2-Dichloroethane (EDC)             | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,1-Dichloroethene                   | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| cis-1,2-Dichloroethene               | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| <b>trans-1,2-Dichloroethene</b>      | <b>6.30</b>   | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,2-Dichloropropane                  | ND            | ---             | 5.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,3-Dichloropropane                  | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 2,2-Dichloropropane                  | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,1-Dichloropropene                  | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| cis-1,3-Dichloropropene              | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| trans-1,3-Dichloropropene            | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Ethylbenzene                         | ND            | ---             | 5.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Hexachlorobutadiene                  | ND            | ---             | 50.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 2-Hexanone                           | ND            | ---             | 100             | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Isopropylbenzene                     | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 4-Isopropyltoluene                   | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Methylene chloride                   | ND            | ---             | 100             | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 4-Methyl-2-pentanone (MiBK)          | ND            | ---             | 100             | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Methyl tert-butyl ether (MTBE)       | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Naphthalene                          | ND            | ---             | 50.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| n-Propylbenzene                      | ND            | ---             | 5.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Styrene                              | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,1,1,2-Tetrachloroethane            | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,1,2,2-Tetrachloroethane            | ND            | ---             | 5.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Tetrachloroethene (PCE)              | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Toluene                              | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,2,3-Trichlorobenzene               | ND            | ---             | 20.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,2,4-Trichlorobenzene               | ND            | ---             | 20.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,1,1-Trichloroethane                | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,1,2-Trichloroethane                | ND            | ---             | 5.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Trichloroethene (TCE)                | ND            | ---             | 4.00            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| Trichlorofluoromethane               | ND            | ---             | 20.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |
| 1,2,3-Trichloropropane               | ND            | ---             | 10.0            | ug/L                 | 10       | 10/23/23 20:33        | EPA 8260D   |             |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3J1449 - 11 06 23 1317**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Sample Result | Detection Limit       | Reporting Limit | Units                   | Dilution              | Date Analyzed         | Method Ref.      | Notes |
|----------------------------------------------|---------------|-----------------------|-----------------|-------------------------|-----------------------|-----------------------|------------------|-------|
| <b>MW16-20231017 (A3J1449-01RE1)</b>         |               | <b>Matrix: Water</b>  |                 |                         | <b>Batch: 23J0862</b> |                       | <b>V-01</b>      |       |
| 1,2,4-Trimethylbenzene                       | ND            | ---                   | 10.0            | ug/L                    | 10                    | 10/23/23 20:33        | EPA 8260D        |       |
| 1,3,5-Trimethylbenzene                       | ND            | ---                   | 10.0            | ug/L                    | 10                    | 10/23/23 20:33        | EPA 8260D        |       |
| Vinyl chloride                               | ND            | ---                   | 2.00            | ug/L                    | 10                    | 10/23/23 20:33        | EPA 8260D        |       |
| m,p-Xylene                                   | ND            | ---                   | 10.0            | ug/L                    | 10                    | 10/23/23 20:33        | EPA 8260D        |       |
| o-Xylene                                     | ND            | ---                   | 5.00            | ug/L                    | 10                    | 10/23/23 20:33        | EPA 8260D        |       |
| <i>Surrogate: 1,4-Difluorobenzene (Surr)</i> |               | <i>Recovery: 93 %</i> |                 | <i>Limits: 80-120 %</i> | <i>1</i>              | <i>10/23/23 20:33</i> | <i>EPA 8260D</i> |       |
| <i>Toluene-d8 (Surr)</i>                     |               | <i>102 %</i>          |                 | <i>80-120 %</i>         | <i>1</i>              | <i>10/23/23 20:33</i> | <i>EPA 8260D</i> |       |
| <i>4-Bromofluorobenzene (Surr)</i>           |               | <i>105 %</i>          |                 | <i>80-120 %</i>         | <i>1</i>              | <i>10/23/23 20:33</i> | <i>EPA 8260D</i> |       |
| <b>MW17-20231017 (A3J1449-02)</b>            |               | <b>Matrix: Water</b>  |                 |                         | <b>Batch: 23J0824</b> |                       |                  |       |
| Acetone                                      | ND            | ---                   | 20.0            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Acrylonitrile                                | ND            | ---                   | 2.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Benzene                                      | ND            | ---                   | 0.200           | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Bromobenzene                                 | ND            | ---                   | 0.500           | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Bromochloromethane                           | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Bromodichloromethane                         | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Bromoform                                    | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Bromomethane                                 | ND            | ---                   | 5.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| 2-Butanone (MEK)                             | ND            | ---                   | 10.0            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| n-Butylbenzene                               | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| sec-Butylbenzene                             | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| tert-Butylbenzene                            | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Carbon disulfide                             | ND            | ---                   | 10.0            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Carbon tetrachloride                         | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Chlorobenzene                                | ND            | ---                   | 0.500           | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Chloroethane                                 | ND            | ---                   | 5.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Chloroform                                   | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Chloromethane                                | ND            | ---                   | 5.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| 2-Chlorotoluene                              | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| 4-Chlorotoluene                              | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| Dibromochloromethane                         | ND            | ---                   | 1.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| 1,2-Dibromo-3-chloropropane                  | ND            | ---                   | 5.00            | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |
| 1,2-Dibromoethane (EDB)                      | ND            | ---                   | 0.500           | ug/L                    | 1                     | 10/21/23 07:28        | EPA 8260D        |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3J1449 - 11 06 23 1317**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                           | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|-----------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW17-20231017 (A3J1449-02)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23J0824</b> |             |       |
| Dibromomethane                    | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,2-Dichlorobenzene               | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,3-Dichlorobenzene               | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,4-Dichlorobenzene               | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Dichlorodifluoromethane           | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,1-Dichloroethane                | ND            | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)          | ND            | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| <b>1,1-Dichloroethene</b>         | <b>0.450</b>  | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| <b>cis-1,2-Dichloroethene</b>     | <b>146</b>    | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| <b>trans-1,2-Dichloroethene</b>   | <b>7.03</b>   | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,2-Dichloropropane               | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,3-Dichloropropane               | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 2,2-Dichloropropane               | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,1-Dichloropropene               | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| cis-1,3-Dichloropropene           | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| trans-1,3-Dichloropropene         | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Ethylbenzene                      | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Hexachlorobutadiene               | ND            | ---             | 5.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 2-Hexanone                        | ND            | ---             | 10.0            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Isopropylbenzene                  | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 4-Isopropyltoluene                | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Methylene chloride                | ND            | ---             | 10.0            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MiBK)       | ND            | ---             | 10.0            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE)    | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Naphthalene                       | ND            | ---             | 5.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| n-Propylbenzene                   | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Styrene                           | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane         | ND            | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane         | ND            | ---             | 0.500           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Tetrachloroethene (PCE)           | ND            | ---             | 0.400           | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| Toluene                           | ND            | ---             | 1.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene            | ND            | ---             | 2.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene            | ND            | ---             | 2.00            | ug/L                 | 1        | 10/21/23 07:28        | EPA 8260D   |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit | Reporting Limit | Units            | Dilution | Date Analyzed  | Method Ref. | Notes      |
|---------------------------------------|---------------|-----------------|-----------------|------------------|----------|----------------|-------------|------------|
| MW17-20231017 (A3J1449-02)            |               |                 |                 | Matrix: Water    |          | Batch: 23J0824 |             |            |
| 1,1,1-Trichloroethane                 | ND            | ---             | 0.400           | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| 1,1,2-Trichloroethane                 | ND            | ---             | 0.500           | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| Trichloroethene (TCE)                 | 14.0          | ---             | 0.400           | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| Trichlorofluoromethane                | ND            | ---             | 2.00            | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| 1,2,3-Trichloropropane                | ND            | ---             | 1.00            | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| 1,2,4-Trimethylbenzene                | ND            | ---             | 1.00            | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| 1,3,5-Trimethylbenzene                | ND            | ---             | 1.00            | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| Vinyl chloride                        | 1.81          | ---             | 0.200           | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| m,p-Xylene                            | ND            | ---             | 1.00            | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| o-Xylene                              | ND            | ---             | 0.500           | ug/L             | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery: 103 % |                 | Limits: 80-120 % | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| Toluene-d8 (Surr)                     |               | 101 %           |                 | 80-120 %         | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| 4-Bromofluorobenzene (Surr)           |               | 97 %            |                 | 80-120 %         | 1        | 10/21/23 07:28 | EPA 8260D   |            |
| MW18-20231017 (A3J1449-03RE1)         |               |                 |                 | Matrix: Water    |          | Batch: 23J0862 |             | V-01, V-13 |
| Acetone                               | ND            | ---             | 40.0            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Acrylonitrile                         | ND            | ---             | 4.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Benzene                               | ND            | ---             | 0.400           | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Bromobenzene                          | ND            | ---             | 1.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Bromochloromethane                    | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Bromodichloromethane                  | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Bromoform                             | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Bromomethane                          | ND            | ---             | 10.0            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 2-Butanone (MEK)                      | ND            | ---             | 20.0            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| n-Butylbenzene                        | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| sec-Butylbenzene                      | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| tert-Butylbenzene                     | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Carbon disulfide                      | ND            | ---             | 20.0            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Carbon tetrachloride                  | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Chlorobenzene                         | ND            | ---             | 1.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Chloroethane                          | ND            | ---             | 10.0            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Chloroform                            | ND            | ---             | 2.00            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Chloromethane                         | ND            | ---             | 10.0            | ug/L             | 2        | 10/23/23 21:01 | EPA 8260D   |            |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes      |
|--------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|------------|
| MW18-20231017 (A3J1449-03RE1)  |               |                 |                 | Matrix: Water |          | Batch: 23J0862 |             | V-01, V-13 |
| 2-Chlorotoluene                | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 4-Chlorotoluene                | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Dibromochloromethane           | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,2-Dibromo-3-chloropropane    | ND            | ---             | 10.0            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,2-Dibromoethane (EDB)        | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Dibromomethane                 | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,2-Dichlorobenzene            | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,3-Dichlorobenzene            | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,4-Dichlorobenzene            | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Dichlorodifluoromethane        | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,1-Dichloroethane             | ND            | ---             | 0.800           | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,2-Dichloroethane (EDC)       | ND            | ---             | 0.800           | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,1-Dichloroethene             | ND            | ---             | 0.800           | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| cis-1,2-Dichloroethene         | 6.40          | ---             | 0.800           | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| trans-1,2-Dichloroethene       | ND            | ---             | 0.800           | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,2-Dichloropropane            | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,3-Dichloropropane            | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 2,2-Dichloropropane            | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,1-Dichloropropene            | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| cis-1,3-Dichloropropene        | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| trans-1,3-Dichloropropene      | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Ethylbenzene                   | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Hexachlorobutadiene            | ND            | ---             | 10.0            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 2-Hexanone                     | ND            | ---             | 20.0            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Isopropylbenzene               | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 4-Isopropyltoluene             | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Methylene chloride             | ND            | ---             | 20.0            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 4-Methyl-2-pentanone (MiBK)    | ND            | ---             | 20.0            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Methyl tert-butyl ether (MTBE) | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Naphthalene                    | ND            | ---             | 10.0            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| n-Propylbenzene                | ND            | ---             | 1.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| Styrene                        | ND            | ---             | 2.00            | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |
| 1,1,1,2-Tetrachloroethane      | ND            | ---             | 0.800           | ug/L          | 2        | 10/23/23 21:01 | EPA 8260D   |            |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3J1449 - 11 06 23 1317**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Sample Result | Detection Limit        | Reporting Limit | Units                   | Dilution              | Date Analyzed         | Method Ref.       | Notes |
|----------------------------------------------|---------------|------------------------|-----------------|-------------------------|-----------------------|-----------------------|-------------------|-------|
| <b>MW18-20231017 (A3J1449-03RE1)</b>         |               | <b>Matrix: Water</b>   |                 |                         | <b>Batch: 23J0862</b> |                       | <b>V-01, V-13</b> |       |
| 1,1,2,2-Tetrachloroethane                    | ND            | ---                    | 1.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| Tetrachloroethene (PCE)                      | ND            | ---                    | 0.800           | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| Toluene                                      | ND            | ---                    | 2.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,2,3-Trichlorobenzene                       | ND            | ---                    | 4.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,2,4-Trichlorobenzene                       | ND            | ---                    | 4.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,1,1-Trichloroethane                        | ND            | ---                    | 0.800           | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,1,2-Trichloroethane                        | ND            | ---                    | 1.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| Trichloroethene (TCE)                        | ND            | ---                    | 0.800           | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| Trichlorofluoromethane                       | ND            | ---                    | 4.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,2,3-Trichloropropane                       | ND            | ---                    | 2.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,2,4-Trimethylbenzene                       | ND            | ---                    | 2.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| 1,3,5-Trimethylbenzene                       | ND            | ---                    | 2.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| <b>Vinyl chloride</b>                        | <b>1.64</b>   | ---                    | 0.400           | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| m,p-Xylene                                   | ND            | ---                    | 2.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| o-Xylene                                     | ND            | ---                    | 1.00            | ug/L                    | 2                     | 10/23/23 21:01        | EPA 8260D         |       |
| <i>Surrogate: 1,4-Difluorobenzene (Surr)</i> |               | <i>Recovery: 103 %</i> |                 | <i>Limits: 80-120 %</i> | <i>1</i>              | <i>10/23/23 21:01</i> | <i>EPA 8260D</i>  |       |
| <i>Toluene-d8 (Surr)</i>                     |               | <i>102 %</i>           |                 | <i>80-120 %</i>         | <i>1</i>              | <i>10/23/23 21:01</i> | <i>EPA 8260D</i>  |       |
| <i>4-Bromofluorobenzene (Surr)</i>           |               | <i>100 %</i>           |                 | <i>80-120 %</i>         | <i>1</i>              | <i>10/23/23 21:01</i> | <i>EPA 8260D</i>  |       |
| <b>MW19-20231017 (A3J1449-04RE1)</b>         |               | <b>Matrix: Water</b>   |                 |                         | <b>Batch: 23J0862</b> |                       |                   |       |
| Acetone                                      | ND            | ---                    | 20.0            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Acrylonitrile                                | ND            | ---                    | 2.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Benzene                                      | ND            | ---                    | 0.200           | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Bromobenzene                                 | ND            | ---                    | 0.500           | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Bromochloromethane                           | ND            | ---                    | 1.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Bromodichloromethane                         | ND            | ---                    | 1.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Bromoform                                    | ND            | ---                    | 1.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Bromomethane                                 | ND            | ---                    | 5.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| 2-Butanone (MEK)                             | ND            | ---                    | 10.0            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| n-Butylbenzene                               | ND            | ---                    | 1.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| sec-Butylbenzene                             | ND            | ---                    | 1.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| tert-Butylbenzene                            | ND            | ---                    | 1.00            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |
| Carbon disulfide                             | ND            | ---                    | 10.0            | ug/L                    | 1                     | 10/23/23 16:28        | EPA 8260D         |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                       | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|-------------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| MW19-20231017 (A3J1449-04RE1) |               |                 |                 | Matrix: Water |          | Batch: 23J0862 |             |       |
| Carbon tetrachloride          | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Chlorobenzene                 | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Chloroethane                  | ND            | ---             | 5.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Chloroform                    | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Chloromethane                 | ND            | ---             | 5.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 2-Chlorotoluene               | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 4-Chlorotoluene               | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Dibromochloromethane          | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane   | ND            | ---             | 5.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)       | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Dibromomethane                | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,2-Dichlorobenzene           | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,3-Dichlorobenzene           | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,4-Dichlorobenzene           | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Dichlorodifluoromethane       | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,1-Dichloroethane            | ND            | ---             | 0.400           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)      | ND            | ---             | 0.400           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,1-Dichloroethene            | ND            | ---             | 0.400           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| cis-1,2-Dichloroethene        | ND            | ---             | 3.20            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   | R-06  |
| trans-1,2-Dichloroethene      | ND            | ---             | 0.400           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,2-Dichloropropane           | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,3-Dichloropropane           | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 2,2-Dichloropropane           | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 1,1-Dichloropropene           | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| cis-1,3-Dichloropropene       | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| trans-1,3-Dichloropropene     | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Ethylbenzene                  | ND            | ---             | 0.500           | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Hexachlorobutadiene           | ND            | ---             | 5.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 2-Hexanone                    | ND            | ---             | 10.0            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Isopropylbenzene              | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 4-Isopropyltoluene            | ND            | ---             | 1.00            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| Methylene chloride            | ND            | ---             | 10.0            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MiBK)   | ND            | ---             | 10.0            | ug/L          | 1        | 10/23/23 16:28 | EPA 8260D   |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
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503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: OCS  
Project Number: 461M114811  
Project Manager: Russ BunkerReport ID:  
A3J1449 - 11 06 23 1317

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit      | Reporting Limit | Units   | Dilution              | Date Analyzed  | Method Ref.    | Notes     |
|---------------------------------------|---------------|----------------------|-----------------|---------|-----------------------|----------------|----------------|-----------|
| <b>MW19-20231017 (A3J1449-04RE1)</b>  |               | <b>Matrix: Water</b> |                 |         | <b>Batch: 23J0862</b> |                |                |           |
| Methyl tert-butyl ether (MTBE)        | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Naphthalene                           | ND            | ---                  | 5.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| n-Propylbenzene                       | ND            | ---                  | 0.500           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Styrene                               | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,1,1,2-Tetrachloroethane             | ND            | ---                  | 0.400           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,1,2,2-Tetrachloroethane             | ND            | ---                  | 0.500           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Tetrachloroethene (PCE)               | ND            | ---                  | 0.400           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Toluene                               | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,2,3-Trichlorobenzene                | ND            | ---                  | 2.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,2,4-Trichlorobenzene                | ND            | ---                  | 2.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,1,1-Trichloroethane                 | ND            | ---                  | 0.400           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,1,2-Trichloroethane                 | ND            | ---                  | 0.500           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Trichloroethene (TCE)                 | ND            | ---                  | 0.400           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Trichlorofluoromethane                | ND            | ---                  | 2.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,2,3-Trichloropropane                | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,2,4-Trimethylbenzene                | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| 1,3,5-Trimethylbenzene                | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Vinyl chloride                        | ND            | ---                  | 0.200           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| m,p-Xylene                            | ND            | ---                  | 1.00            | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| o-Xylene                              | ND            | ---                  | 0.500           | ug/L    | 1                     | 10/23/23 16:28 | EPA 8260D      |           |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery:            | 104 %           | Limits: | 80-120 %              | 1              | 10/23/23 16:28 | EPA 8260D |
| Toluene-d8 (Surr)                     |               |                      | 100 %           |         | 80-120 %              | 1              | 10/23/23 16:28 | EPA 8260D |
| 4-Bromofluorobenzene (Surr)           |               |                      | 99 %            |         | 80-120 %              | 1              | 10/23/23 16:28 | EPA 8260D |

|                                  |    |                      |       |      |                       |                |           |  |
|----------------------------------|----|----------------------|-------|------|-----------------------|----------------|-----------|--|
| <b>RW1-20231017 (A3J1449-05)</b> |    | <b>Matrix: Water</b> |       |      | <b>Batch: 23J0824</b> |                |           |  |
| Acetone                          | ND | ---                  | 20.0  | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Acrylonitrile                    | ND | ---                  | 2.00  | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Benzene                          | ND | ---                  | 0.200 | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Bromobenzene                     | ND | ---                  | 0.500 | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Bromochloromethane               | ND | ---                  | 1.00  | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Bromodichloromethane             | ND | ---                  | 1.00  | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Bromoform                        | ND | ---                  | 1.00  | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |
| Bromomethane                     | ND | ---                  | 5.00  | ug/L | 1                     | 10/21/23 08:23 | EPA 8260D |  |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Sample Result | Detection Limit | Reporting Limit | Units         | Dilution | Date Analyzed  | Method Ref. | Notes |
|-----------------------------|---------------|-----------------|-----------------|---------------|----------|----------------|-------------|-------|
| RW1-20231017 (A3J1449-05)   |               |                 |                 | Matrix: Water |          | Batch: 23J0824 |             |       |
| 2-Butanone (MEK)            | ND            | ---             | 10.0            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| n-Butylbenzene              | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| sec-Butylbenzene            | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| tert-Butylbenzene           | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Carbon disulfide            | ND            | ---             | 10.0            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Carbon tetrachloride        | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Chlorobenzene               | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Chloroethane                | ND            | ---             | 5.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Chloroform                  | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Chloromethane               | ND            | ---             | 5.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 2-Chlorotoluene             | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 4-Chlorotoluene             | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Dibromochloromethane        | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane | ND            | ---             | 5.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)     | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Dibromomethane              | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,2-Dichlorobenzene         | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,3-Dichlorobenzene         | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,4-Dichlorobenzene         | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Dichlorodifluoromethane     | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,1-Dichloroethane          | ND            | ---             | 0.400           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)    | ND            | ---             | 0.400           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,1-Dichloroethene          | ND            | ---             | 0.400           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| cis-1,2-Dichloroethene      | 17.8          | ---             | 0.400           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| trans-1,2-Dichloroethene    | 0.880         | ---             | 0.400           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,2-Dichloropropane         | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,3-Dichloropropane         | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 2,2-Dichloropropane         | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| 1,1-Dichloropropene         | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| cis-1,3-Dichloropropene     | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| trans-1,3-Dichloropropene   | ND            | ---             | 1.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Ethylbenzene                | ND            | ---             | 0.500           | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |
| Hexachlorobutadiene         | ND            | ---             | 5.00            | ug/L          | 1        | 10/21/23 08:23 | EPA 8260D   |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker****Report ID:**  
**A3J1449 - 11 06 23 1317**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                      | Sample Result | Detection Limit      | Reporting Limit | Units          | Dilution              | Date Analyzed  | Method Ref.           | Notes            |
|----------------------------------------------|---------------|----------------------|-----------------|----------------|-----------------------|----------------|-----------------------|------------------|
| <b>RW1-20231017 (A3J1449-05)</b>             |               | <b>Matrix: Water</b> |                 |                | <b>Batch: 23J0824</b> |                |                       |                  |
| 2-Hexanone                                   | ND            | ---                  | 10.0            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Isopropylbenzene                             | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 4-Isopropyltoluene                           | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Methylene chloride                           | ND            | ---                  | 10.0            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 4-Methyl-2-pentanone (MIBK)                  | ND            | ---                  | 10.0            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Methyl tert-butyl ether (MTBE)               | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Naphthalene                                  | ND            | ---                  | 5.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| n-Propylbenzene                              | ND            | ---                  | 0.500           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Styrene                                      | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,1,1,2-Tetrachloroethane                    | ND            | ---                  | 0.400           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,1,2,2-Tetrachloroethane                    | ND            | ---                  | 0.500           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| <b>Tetrachloroethene (PCE)</b>               | <b>1.19</b>   | ---                  | 0.400           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Toluene                                      | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,2,3-Trichlorobenzene                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,2,4-Trichlorobenzene                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,1,1-Trichloroethane                        | ND            | ---                  | 0.400           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,1,2-Trichloroethane                        | ND            | ---                  | 0.500           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| <b>Trichloroethene (TCE)</b>                 | <b>25.5</b>   | ---                  | 0.400           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| Trichlorofluoromethane                       | ND            | ---                  | 2.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,2,3-Trichloropropane                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,2,4-Trimethylbenzene                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| 1,3,5-Trimethylbenzene                       | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| <b>Vinyl chloride</b>                        | <b>0.250</b>  | ---                  | 0.200           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| m,p-Xylene                                   | ND            | ---                  | 1.00            | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| o-Xylene                                     | ND            | ---                  | 0.500           | ug/L           | 1                     | 10/21/23 08:23 | EPA 8260D             |                  |
| <i>Surrogate: 1,4-Difluorobenzene (Surr)</i> |               | <i>Recovery:</i>     | <i>106 %</i>    | <i>Limits:</i> | <i>80-120 %</i>       | <i>1</i>       | <i>10/21/23 08:23</i> | <i>EPA 8260D</i> |
| <i>Toluene-d8 (Surr)</i>                     |               |                      | <i>100 %</i>    |                | <i>80-120 %</i>       | <i>1</i>       | <i>10/21/23 08:23</i> | <i>EPA 8260D</i> |
| <i>4-Bromofluorobenzene (Surr)</i>           |               |                      | <i>97 %</i>     |                | <i>80-120 %</i>       | <i>1</i>       | <i>10/21/23 08:23</i> | <i>EPA 8260D</i> |

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 461M114811  
Project Manager: Russ Bunker

**Report ID:**  
A3J1449 - 11 06 23 1317

ANALYTICAL SAMPLE RESULTS

Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes       |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------------|
| <b>MW16-20231017 (A3J1449-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23J0785</b> |             | <b>PRES</b> |
| Total Organic Carbon                 | 989           | ---             | 100             | mg/L                 | 100      | 10/20/23 23:58        | SM 5310 C   |             |
| <b>MW17-20231017 (A3J1449-02)</b>    |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23J0785</b> |             |             |
| Total Organic Carbon                 | 1.28          | ---             | 1.00            | mg/L                 | 1        | 10/20/23 09:44        | SM 5310 C   |             |
| <b>MW18-20231017 (A3J1449-03RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23K0138</b> |             |             |
| Total Organic Carbon                 | 115           | ---             | 20.0            | mg/L                 | 20       | 11/03/23 14:56        | SM 5310 C   |             |
| <b>RW1-20231017 (A3J1449-05)</b>     |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23J0785</b> |             |             |
| Total Organic Carbon                 | 1.27          | ---             | 1.00            | mg/L                 | 1        | 10/20/23 10:14        | SM 5310 C   |             |

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A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23J0824-BLK1)        |        |                 | Prepared: 10/20/23 14:15 |       | Analyzed: 10/21/23 02:56 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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## ANALYTICAL REPORT

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Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| Blank (23J0824-BLK1)           |        |                 |                 |       |          | Prepared: 10/20/23 14:15 Analyzed: 10/21/23 02:56 |               |       |              |     |           |       |
| 1,2-Dichloropropane            | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene      | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                   | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene            | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                     | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene               | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene             | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride             | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                    | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Styrene                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)        | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Toluene                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane          | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane          | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)          | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                 | ND     | ---             | 0.200           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                     | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                       | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 106 %

Limits: 80-120 %

Dilution: 1x

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23J0824-BLK1)        |        |                 | Prepared: 10/20/23 14:15 |                  | Analyzed: 10/21/23 02:56 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 97 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23J0824-BS1)           |        |                 | Prepared: 10/20/23 14:15 |                  | Analyzed: 10/21/23 02:01 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 35.7   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 89    | 80-120%      | --- | ---       |       |
| Acrylonitrile               | 18.9   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| Benzene                     | 19.1   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| Bromobenzene                | 18.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 18.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 22.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| Bromoform                   | 20.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Bromomethane                | 22.5   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)            | 36.6   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 18.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 19.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 19.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 23.5   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 118   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 23.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 117   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 18.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| Chloroethane                | 28.2   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 141   | 80-120%      | --- | ---       | Q-56  |
| Chloroform                  | 20.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| Chloromethane               | 15.8   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 79    | 80-120%      | --- | ---       | Q-55  |
| 2-Chlorotoluene             | 18.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 95    | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 20.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 19.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 17.2   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 86    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 19.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Dibromomethane              | 19.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 18.8   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 20.1   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 18.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 90    | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 21.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane          | 19.6   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| LCS (23J0824-BS1)              |        |                 |                 |       |          | Prepared: 10/20/23 14:15 Analyzed: 10/21/23 02:01 |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 21.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 20.2   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 101   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 17.7   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 88    | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 17.4   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 87    | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 17.7   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 88    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 19.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 98    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 20.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 19.2   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 18.4   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 20.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 104   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 20.1   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 15.5   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 78    | 80-120%      | --- | ---       | Q-55  |
| 2-Hexanone                     | 34.2   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 86    | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 17.7   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 89    | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 17.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 85    | 80-120%      | --- | ---       |       |
| Methylene chloride             | 20.0   | ---             | 10.0            | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 36.8   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 21.3   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 13.4   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 67    | 80-120%      | --- | ---       | Q-55  |
| n-Propylbenzene                | 19.8   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Styrene                        | 18.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 22.5   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 113   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 20.0   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 18.6   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 93    | 80-120%      | --- | ---       |       |
| Toluene                        | 17.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 89    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 16.0   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 80    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 14.0   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 70    | 80-120%      | --- | ---       | Q-55  |
| 1,1,1-Trichloroethane          | 22.2   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 111   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 19.8   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 17.2   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 86    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 27.6   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 138   | 80-120%      | --- | ---       | Q-56  |
| 1,2,3-Trichloropropane         | 21.5   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 20.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 20.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 101   | 80-120%      | --- | ---       |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23J0824-BS1)                |        |                 | Prepared: 10/20/23 14:15 |                  | Analyzed: 10/21/23 02:01 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 18.7   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 40.0   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 17.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 87    | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 96 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 97 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 93 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23J0824-DUP1)

Prepared: 10/20/23 14:15 Analyzed: 10/21/23 13:50

## QC Source Sample: Non-SDG (A3J1324-01)

|                             |    |     |      |      |     |     |    |     |     |     |     |
|-----------------------------|----|-----|------|------|-----|-----|----|-----|-----|-----|-----|
| Acetone                     | ND | --- | 2000 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Acrylonitrile               | ND | --- | 200  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Benzene                     | ND | --- | 20.0 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Bromobenzene                | ND | --- | 50.0 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Bromochloromethane          | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Bromoform                   | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Bromomethane                | ND | --- | 500  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | --- | 1000 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Carbon disulfide            | ND | --- | 1000 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Chlorobenzene               | ND | --- | 50.0 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Chloroethane                | ND | --- | 500  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Chloroform                  | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Chloromethane               | ND | --- | 500  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | --- | 500  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | --- | 50.0 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| Dibromomethane              | ND | --- | 100  | ug/L | 100 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND | --- | 50.0 | ug/L | 100 | --- | ND | --- | --- | --- | 30% |

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Project: **OCS**

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C              |        |                 |                                                      |       |          | Water        |               |       |              |     |           |       |
| Duplicate (23J0824-DUP1)               |        |                 | Prepared: 10/20/23 14:15    Analyzed: 10/21/23 13:50 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1324-01) |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 40.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 40.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 40.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | 198    | ---             | 40.0                                                 | ug/L  | 100      | ---          | 184           | ---   | ---          | 7   | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 40.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 500                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 1000                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 1000                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 1000                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | ---             | 500                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 40.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | 11000  | ---             | 40.0                                                 | ug/L  | 100      | ---          | 11100         | ---   | ---          | 1   | 30%       |       |
| Toluene                                | ND     | ---             | 100                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 200                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 200                                                  | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 40.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 50.0                                                 | ug/L  | 100      | ---          | ND            | ---   | ---          | --- | 30%       |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **461M114811**Project Manager: **Russ Bunker****Report ID:****A3J1449 - 11 06 23 1317**

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C              |        |                 |                          |                  |                          | Water                                             |               |       |              |     |           |       |
| Duplicate (23J0824-DUP1)               |        |                 | Prepared: 10/20/23 14:15 |                  | Analyzed: 10/21/23 13:50 |                                                   |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1324-01) |        |                 |                          |                  |                          |                                                   |               |       |              |     |           |       |
| Trichloroethene (TCE)                  | 297    | ---             | 40.0                     | ug/L             | 100                      | ---                                               | 292           | ---   | ---          | 2   | 30%       |       |
| Trichlorofluoromethane                 | ND     | ---             | 200                      | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                 | ND     | ---             | 100                      | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                 | ND     | ---             | 100                      | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                 | ND     | ---             | 100                      | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                         | ND     | ---             | 20.0                     | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                             | ND     | ---             | 100                      | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                               | ND     | ---             | 50.0                     | ug/L             | 100                      | ---                                               | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 105 % |                          | Limits: 80-120 % |                          | Dilution: 1x                                      |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 99 %            |                          | 80-120 %         |                          | "                                                 |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 98 %            |                          | 80-120 %         |                          | "                                                 |               |       |              |     |           |       |
| Matrix Spike (23J0824-MS1)             |        |                 |                          |                  |                          | Prepared: 10/20/23 14:15 Analyzed: 10/21/23 06:34 |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1412-01) |        |                 |                          |                  |                          |                                                   |               |       |              |     |           |       |
| EPA 8260D                              |        |                 |                          |                  |                          |                                                   |               |       |              |     |           |       |
| Acetone                                | 102    | ---             | 20.0                     | ug/L             | 1                        | 40.0                                              | 80.6          | 54    | 39-160%      | --- | ---       |       |
| Acrylonitrile                          | 19.3   | ---             | 2.00                     | ug/L             | 1                        | 20.0                                              | ND            | 96    | 63-135%      | --- | ---       |       |
| Benzene                                | 19.9   | ---             | 0.200                    | ug/L             | 1                        | 20.0                                              | ND            | 99    | 79-120%      | --- | ---       |       |
| Bromobenzene                           | 19.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0                                              | ND            | 95    | 80-120%      | --- | ---       |       |
| Bromochloromethane                     | 19.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 96    | 78-123%      | --- | ---       |       |
| Bromodichloromethane                   | 23.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 118   | 79-125%      | --- | ---       |       |
| Bromoform                              | 20.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 102   | 66-130%      | --- | ---       |       |
| Bromomethane                           | 22.7   | ---             | 5.00                     | ug/L             | 1                        | 20.0                                              | ND            | 113   | 53-141%      | --- | ---       |       |
| 2-Butanone (MEK)                       | 43.7   | ---             | 10.0                     | ug/L             | 1                        | 40.0                                              | ND            | 109   | 56-143%      | --- | ---       |       |
| n-Butylbenzene                         | 20.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 100   | 75-128%      | --- | ---       |       |
| sec-Butylbenzene                       | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 107   | 77-126%      | --- | ---       |       |
| tert-Butylbenzene                      | 22.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 113   | 78-124%      | --- | ---       |       |
| Carbon disulfide                       | 26.6   | ---             | 10.0                     | ug/L             | 1                        | 20.0                                              | ND            | 133   | 64-133%      | --- | ---       |       |
| Carbon tetrachloride                   | 26.7   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | ND            | 134   | 72-136%      | --- | ---       |       |
| Chlorobenzene                          | 19.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0                                              | ND            | 98    | 80-120%      | --- | ---       |       |
| Chloroethane                           | 31.1   | ---             | 5.00                     | ug/L             | 1                        | 20.0                                              | ND            | 156   | 60-138%      | --- | ---       | Q-54b |
| Chloroform                             | 22.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0                                              | 0.840         | 106   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 17.6   | ---             | 5.00                     | ug/L             | 1                        | 20.0                                              | ND            | 88    | 50-139%      | --- | ---       | Q-54h |

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23J0824-MS1)             |        |                 | Prepared: 10/20/23 14:15 |       | Analyzed: 10/21/23 06:34 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1412-01) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 2-Chlorotoluene                        | 20.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 100   | 79-122%      | --- | ---       | Q-54j |
| 4-Chlorotoluene                        | 21.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 108   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 19.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 98    | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 17.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 88    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 19.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 98    | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 19.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 97    | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 18.9   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 94    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 20.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 103   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 18.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 92    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 26.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 133   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 20.7   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 103   | 77-125%      | --- | ---       | Q-54i |
| 1,2-Dichloroethane (EDC)               | 21.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 106   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 22.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 111   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 18.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 93    | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 20.1   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 100   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 18.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 92    | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 19.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 100   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 20.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 100   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 22.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 15.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 79    | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 20.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 21.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 106   | 79-121%      | --- | ---       | Q-54i |
| Hexachlorobutadiene                    | 16.4   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 82    | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 38.3   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 96    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 19.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 97    | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 18.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 94    | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 21.1   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 106   | 74-124%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)            | 38.9   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 97    | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 21.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 109   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 17.4   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 87    | 61-128%      | --- | ---       |       |
| n-Propylbenzene                        | 21.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 108   | 76-126%      | --- | ---       |       |
| Styrene                                | 19.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 98    | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 23.1   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 115   | 78-124%      | --- | ---       |       |

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Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0824 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23J0824-MS1)             |        |                 | Prepared: 10/20/23 14:15 |                  | Analyzed: 10/21/23 06:34 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1412-01) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,1,2,2-Tetrachloroethane              | 20.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 100   | 71-121%      | --- | ---       | Q-54a |
| Tetrachloroethene (PCE)                | 20.3   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 101   | 74-129%      | --- | ---       |       |
| Toluene                                | 18.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 93    | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 17.7   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 88    | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 16.8   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 84    | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 24.5   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 123   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 19.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 100   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 17.8   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 89    | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 33.3   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 166   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 21.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 105   | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 107   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 109   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 23.2   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ND            | 116   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 42.6   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ND            | 106   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 18.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 93    | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 95 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 96 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 101 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

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Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23J0862-BLK1)        |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 12:22 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C      |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23J0862-BLK1)           |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 12:22 |              |               |       |              |     |           |       |
| 1,2-Dichloropropane            | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene      | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                   | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene            | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                     | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene               | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride             | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                    | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Styrene                        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)        | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Toluene                        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane          | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane         | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane         | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                 | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                       | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,4-Dichloro-2-butene    | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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## ANALYTICAL REPORT

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                    | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C                  |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23J0862-BLK1)                       |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 12:22 |              |               |       |              |     |           |       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (RFD | ---    | 2.00            | ug/L                     | 1     | ---                      | ---          | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)           |        | Recovery: 103 % | Limits: 80-120 %         |       | Dilution: 1x             |              |               |       |              |     |           |       |
| Toluene-d8 (Surr)                          |        | 101 %           | 80-120 %                 |       | "                        |              |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)                |        | 99 %            | 80-120 %                 |       | "                        |              |               |       |              |     |           |       |
|                                            |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| LCS (23J0862-BS1)                          |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 11:15 |              |               |       |              |     |           |       |
| EPA 8260D                                  |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                                    | 44.2   | ---             | 20.0                     | ug/L  | 1                        | 40.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Acrylonitrile                              | 17.6   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ---           | 88    | 80-120%      | --- | ---       |       |
| Benzene                                    | 18.7   | ---             | 0.200                    | ug/L  | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| Bromobenzene                               | 18.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| Bromochloromethane                         | 18.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |       |
| Bromodichloromethane                       | 22.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| Bromoform                                  | 20.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Bromomethane                               | 25.2   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 126   | 80-120%      | --- | ---       | Q-56  |
| 2-Butanone (MEK)                           | 39.6   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| n-Butylbenzene                             | 22.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene                           | 21.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene                          | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 111   | 80-120%      | --- | ---       |       |
| Carbon disulfide                           | 25.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ---           | 128   | 80-120%      | --- | ---       | Q-56  |
| Carbon tetrachloride                       | 25.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 125   | 80-120%      | --- | ---       | Q-56  |
| Chlorobenzene                              | 19.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| Chloroethane                               | 31.1   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 155   | 80-120%      | --- | ---       | Q-56  |
| Chloroform                                 | 20.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| Chloromethane                              | 16.8   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 84    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene                            | 20.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene                            | 22.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Dibromochloromethane                       | 20.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane                | 16.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ---           | 84    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                    | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Dibromomethane                             | 19.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene                        | 19.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                        | 21.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                        | 19.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ---           | 96    | 80-120%      | --- | ---       |       |

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Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| LCS (23J0862-BS1)              |        |                 |                 |       |          | Prepared: 10/23/23 08:55 Analyzed: 10/23/23 11:15 |               |       |              |     |           |       |
| Dichlorodifluoromethane        | 22.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 114   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane             | 19.7   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)       | 21.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 21.7   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 108   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 18.5   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 18.4   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 17.4   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 87    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 20.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 27.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 138   | 80-120%      | --- | ---       | Q-56  |
| 1,1-Dichloropropene            | 21.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 20.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 101   | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 22.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 111   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 21.1   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 21.2   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 33.6   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 84    | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 19.2   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 19.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Methylene chloride             | 20.2   | ---             | 10.0            | ug/L  | 1        | 20.0                                              | ---           | 101   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 34.9   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 87    | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 22.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 110   | 80-120%      | --- | ---       |       |
| Naphthalene                    | 14.5   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 73    | 80-120%      | --- | ---       | Q-55  |
| n-Propylbenzene                | 21.6   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 108   | 80-120%      | --- | ---       |       |
| Styrene                        | 19.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 95    | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 23.7   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 118   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 19.8   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 21.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| Toluene                        | 18.4   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 18.4   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 16.5   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 83    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 23.9   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 119   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 19.6   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 98    | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 17.4   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 87    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 30.0   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 150   | 80-120%      | --- | ---       | Q-56  |
| 1,2,3-Trichloropropane         | 21.2   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                               | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|---------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C             |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23J0862-BS1)                     |        |                 | Prepared: 10/23/23 08:55 |                  | Analyzed: 10/23/23 11:15 |              |               |       |              |     |           |       |
| 1,2,4-Trimethylbenzene                | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                | 22.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| Vinyl chloride                        | 20.1   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| m,p-Xylene                            | 42.0   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| o-Xylene                              | 18.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| trans-1,4-Dichloro-2-butene           | 26.8   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 134   | 80-120%      | --- | ---       | Q-56  |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 28.2   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)      |        | Recovery: 94 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                     |        | 98 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)           |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

Duplicate (23J0862-DUP1) Prepared: 10/23/23 08:55 Analyzed: 10/23/23 19:11 V-01

## QC Source Sample: Non-SDG (A3J1296-09RE1)

|                      |     |     |      |      |    |     |     |     |     |     |     |
|----------------------|-----|-----|------|------|----|-----|-----|-----|-----|-----|-----|
| Acetone              | 768 | --- | 400  | ug/L | 20 | --- | 763 | --- | --- | 0.6 | 30% |
| Acrylonitrile        | ND  | --- | 40.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Benzene              | ND  | --- | 4.00 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Bromobenzene         | ND  | --- | 10.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Bromochloromethane   | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Bromodichloromethane | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Bromoform            | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Bromomethane         | ND  | --- | 100  | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| 2-Butanone (MEK)     | 608 | --- | 200  | ug/L | 20 | --- | 622 | --- | --- | 2   | 30% |
| n-Butylbenzene       | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| sec-Butylbenzene     | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| tert-Butylbenzene    | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Carbon disulfide     | ND  | --- | 200  | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Carbon tetrachloride | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Chlorobenzene        | ND  | --- | 10.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Chloroethane         | ND  | --- | 100  | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Chloroform           | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Chloromethane        | ND  | --- | 100  | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| 2-Chlorotoluene      | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| 4-Chlorotoluene      | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |
| Dibromochloromethane | ND  | --- | 20.0 | ug/L | 20 | --- | ND  | --- | --- | --- | 30% |

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Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                   | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C                 |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Duplicate (23J0862-DUP1)                  |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 19:11 |              | V-01          |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1296-09RE1) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,2-Dibromo-3-chloropropane               | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dibromoethane (EDB)                   | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dibromomethane                            | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichlorobenzene                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichlorobenzene                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                        | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)                  | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                        | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                    | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,2-Dichloroethene                  | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene                 | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                              | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                       | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                                | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                          | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                        | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                        | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)               | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)            | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                               | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                           | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane                 | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane                 | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                   | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                   | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C                 |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Duplicate (23J0862-DUP1)                  |        |                 | Prepared: 10/23/23 08:55 |                  | Analyzed: 10/23/23 19:11 |              | V-01          |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1296-09RE1) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,2,3-Trichlorobenzene                    | ND     | ---             | 40.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                    | ND     | ---             | 40.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                     | ND     | ---             | 8.00                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                     | ND     | ---             | 10.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichloroethene (TCE)                     | ND     | ---             | 8.00                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Trichlorofluoromethane                    | ND     | ---             | 40.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                    | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                    | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                    | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                            | ND     | ---             | 4.00                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| m,p-Xylene                                | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                                  | ND     | ---             | 10.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,4-Dichloro-2-butene               | ND     | ---             | 200                      | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (ND | ND     | ---             | 40.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)          |        | Recovery: 96 %  |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                         |        | 100 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)               |        | 118 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

| Matrix Spike (23J0862-MS1)             |      |     |       | Prepared: 10/23/23 08:55    Analyzed: 10/23/23 13:17 |   |      |    |     |         |     |     | V-01 |  |
|----------------------------------------|------|-----|-------|------------------------------------------------------|---|------|----|-----|---------|-----|-----|------|--|
| QC Source Sample: Non-SDG (A3J1532-02) |      |     |       |                                                      |   |      |    |     |         |     |     |      |  |
| EPA 8260D                              |      |     |       |                                                      |   |      |    |     |         |     |     |      |  |
| Acetone                                | 71.4 | --- | 20.0  | ug/L                                                 | 1 | 40.0 | ND | 178 | 39-160% | --- | --- | Q-01 |  |
| Acrylonitrile                          | 17.9 | --- | 2.00  | ug/L                                                 | 1 | 20.0 | ND | 90  | 63-135% | --- | --- |      |  |
| Benzene                                | 20.2 | --- | 0.200 | ug/L                                                 | 1 | 20.0 | ND | 101 | 79-120% | --- | --- |      |  |
| Bromobenzene                           | 19.3 | --- | 0.500 | ug/L                                                 | 1 | 20.0 | ND | 96  | 80-120% | --- | --- |      |  |
| Bromochloromethane                     | 19.2 | --- | 1.00  | ug/L                                                 | 1 | 20.0 | ND | 96  | 78-123% | --- | --- | Q-54 |  |
| Bromodichloromethane                   | 24.0 | --- | 1.00  | ug/L                                                 | 1 | 20.0 | ND | 120 | 79-125% | --- | --- |      |  |
| Bromoform                              | 21.5 | --- | 1.00  | ug/L                                                 | 1 | 20.0 | ND | 108 | 66-130% | --- | --- |      |  |
| Bromomethane                           | 26.3 | --- | 5.00  | ug/L                                                 | 1 | 20.0 | ND | 132 | 53-141% | --- | --- |      |  |
| 2-Butanone (MEK)                       | 59.0 | --- | 10.0  | ug/L                                                 | 1 | 40.0 | ND | 148 | 56-143% | --- | --- | Q-01 |  |
| n-Butylbenzene                         | 21.9 | --- | 1.00  | ug/L                                                 | 1 | 20.0 | ND | 109 | 75-128% | --- | --- |      |  |
| sec-Butylbenzene                       | 22.2 | --- | 1.00  | ug/L                                                 | 1 | 20.0 | ND | 111 | 77-126% | --- | --- |      |  |
| tert-Butylbenzene                      | 22.7 | --- | 1.00  | ug/L                                                 | 1 | 20.0 | ND | 113 | 78-124% | --- | --- |      |  |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0862 - EPA 5030C              |        |                 |                          |       |                          |              | Water         |       |              |     |           |       |
| Matrix Spike (23J0862-MS1)             |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 13:17 |              | V-01          |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3J1532-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Carbon disulfide                       | 26.7   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 134   | 64-133%      | --- | ---       | Q-54g |
| Carbon tetrachloride                   | 27.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 138   | 72-136%      | --- | ---       | Q-54e |
| Chlorobenzene                          | 20.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 100   | 80-120%      | --- | ---       | Q-54d |
| Chloroethane                           | 32.8   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 164   | 60-138%      | --- | ---       |       |
| Chloroform                             | 21.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 108   | 79-124%      | --- | ---       |       |
| Chloromethane                          | 17.8   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 89    | 50-139%      | --- | ---       |       |
| 2-Chlorotoluene                        | 20.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 79-122%      | --- | ---       | Q-54a |
| 4-Chlorotoluene                        | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 112   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 20.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 17.6   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 88    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 103   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 19.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 99    | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 20.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 100   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 21.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 107   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 19.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 96    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 25.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 129   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 20.7   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 103   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 22.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 110   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 24.1   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 121   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 19.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 95    | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 19.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 97    | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 18.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 92    | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 20.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 101   | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 29.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 146   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 23.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 115   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 20.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 22.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 113   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 21.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 109   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 20.1   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 101   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 46.8   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 117   | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 19.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 99    | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 19.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 99    | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 19.7   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 99    | 74-124%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC    | % REC Limits | RPD          | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|----------|--------------|--------------|-----------|-------|
| Batch 23J0862 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |          |              |              |           |       |
| Matrix Spike (23J0862-MS1)             |        |                 | Prepared: 10/23/23 08:55 |       | Analyzed: 10/23/23 13:17 |              |               |          |              |              | V-01      |       |
| QC Source Sample: Non-SDG (A3J1532-02) |        |                 |                          |       |                          |              |               |          |              |              |           |       |
| 4-Methyl-2-pentanone (MiBK)            | 38.4   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 96       | 67-130%      | ---          | ---       | Q-54k |
| Methyl tert-butyl ether (MTBE)         | 22.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 113      | 71-124%      | ---          | ---       |       |
| Naphthalene                            | 14.8   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 74       | 61-128%      | ---          | ---       |       |
| n-Propylbenzene                        | 22.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 111      | 76-126%      | ---          | ---       |       |
| Styrene                                | 19.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 97       | 78-123%      | ---          | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 24.4   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 122      | 78-124%      | ---          | ---       | Q-54c |
| 1,1,2,2-Tetrachloroethane              | 20.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 101      | 71-121%      | ---          | ---       |       |
| Tetrachloroethene (PCE)                | 21.7   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 109      | 74-129%      | ---          | ---       |       |
| Toluene                                | 19.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 96       | 80-121%      | ---          | ---       |       |
| 1,2,3-Trichlorobenzene                 | 18.2   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 91       | 69-129%      | ---          | ---       |       |
| 1,2,4-Trichlorobenzene                 | 16.1   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 81       | 69-130%      | ---          | ---       | Q-54  |
| 1,1,1-Trichloroethane                  | 26.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 130      | 74-131%      | ---          | ---       |       |
| 1,1,2-Trichloroethane                  | 20.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 102      | 80-120%      | ---          | ---       |       |
| Trichloroethene (TCE)                  | 18.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 93       | 79-123%      | ---          | ---       |       |
| Trichlorofluoromethane                 | 34.4   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 172      | 65-141%      | ---          | ---       |       |
| 1,2,3-Trichloropropane                 | 21.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 106      | 73-122%      | ---          | ---       | Q-54  |
| 1,2,4-Trimethylbenzene                 | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110      | 76-124%      | ---          | ---       |       |
| 1,3,5-Trimethylbenzene                 | 22.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 112      | 75-124%      | ---          | ---       |       |
| Vinyl chloride                         | 22.0   | ---             | 0.200                    | ug/L  | 1                        | 20.0         | ND            | 110      | 58-137%      | ---          | ---       |       |
| m,p-Xylene                             | 43.0   | ---             | 1.00                     | ug/L  | 1                        | 40.0         | ND            | 108      | 80-121%      | ---          | ---       |       |
| o-Xylene                               | 18.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 94       | 78-122%      | ---          | ---       | Q-54  |
| trans-1,4-Dichloro-2-butene            | 27.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 138      | 43-140%      | ---          | ---       |       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane  | 25.5   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 128      | 70-136%      | ---          | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery:       |                          | 95 %  |                          | Limits:      |               | 80-120 % |              | Dilution: 1x |           |       |
| Toluene-d8 (Surr)                      |        |                 |                          | 97 %  |                          |              |               | 80-120 % |              | "            |           |       |
| 4-Bromofluorobenzene (Surr)            |        |                 |                          | 94 %  |                          |              |               | 80-120 % |              | "            |           |       |

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## ANALYTICAL REPORT

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15862 SW 72nd Ave, Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **461M114811**Project Manager: **Russ Bunker****Report ID:****A3J1449 - 11 06 23 1317**

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                                       | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23J0785 - Method Prep: Aq               |        |                 |                                                      |       |          | Water        |               |       |              |     |           |       |
| Blank (23J0785-BLK1)                          |        |                 | Prepared: 10/19/23 17:31    Analyzed: 10/20/23 00:11 |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | ND     | ---             | 1.00                                                 | mg/L  | 1        | ---          | ---           | ---   | ---          | --- | ---       |       |
| LCS (23J0785-BS1)                             |        |                 | Prepared: 10/19/23 17:31    Analyzed: 10/20/23 00:41 |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 10.2   | ---             | 1.00                                                 | mg/L  | 1        | 10.0         | ---           | 102   | 90-114%      | --- | ---       |       |
| Matrix Spike (23J0785-MS1)                    |        |                 | Prepared: 10/19/23 17:31    Analyzed: 10/20/23 01:41 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3J1418-01)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 13.4   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | 2.50          | 109   | 85-115%      | --- | ---       |       |
| Matrix Spike (23J0785-MS2)                    |        |                 | Prepared: 10/19/23 17:31    Analyzed: 10/20/23 06:44 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3J1418-07)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| <u>SM 5310 C</u>                              |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 12.9   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | ND            | 129   | 85-115%      | --- | ---       | Q-01  |
| Matrix Spike Dup (23J0785-MSD1)               |        |                 | Prepared: 10/19/23 17:31    Analyzed: 10/20/23 02:11 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3J1418-01)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 12.9   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | 2.50          | 104   | 85-115%      | 4   | 15%       |       |
| Matrix Spike Dup (23J0785-MSD2)               |        |                 | Prepared: 10/19/23 17:31    Analyzed: 10/20/23 07:14 |       |          |              |               |       |              |     |           |       |
| <u>QC Source Sample: Non-SDG (A3J1418-07)</u> |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                          | 12.5   | ---             | 1.01                                                 | mg/L  | 1        | 10.0         | ND            | 125   | 85-115%      | 3   | 15%       | Q-01  |

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Project: OCS

Project Number: 461M114811

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

| Analyte                                         | Result | Detection Limit | Reporting Limit                                      | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------------------|--------|-----------------|------------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23K0138 - Method Prep: Aq                 |        |                 |                                                      |       |          | Water        |               |       |              |     |           |       |
| Blank (23K0138-BLK1)                            |        |                 | Prepared: 11/03/23 08:13    Analyzed: 11/03/23 13:56 |       |          |              |               |       |              |     |           |       |
| SM 5310 C                                       |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                            | ND     | ---             | 1.00                                                 | mg/L  | 1        | ---          | ---           | ---   | ---          | --- | ---       |       |
| LCS (23K0138-BS1)                               |        |                 | Prepared: 11/03/23 08:13    Analyzed: 11/03/23 14:25 |       |          |              |               |       |              |     |           |       |
| SM 5310 C                                       |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                            | 10.3   | ---             | 1.00                                                 | mg/L  | 1        | 10.0         | ---           | 103   | 90-114%      | --- | ---       |       |
| Matrix Spike (23K0138-MS1)                      |        |                 | Prepared: 11/03/23 08:13    Analyzed: 11/03/23 15:26 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: MW18-20231017 (A3J1449-03RE1) |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| SM 5310 C                                       |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                            | 322    | ---             | 20.2                                                 | mg/L  | 20       | 200          | 115           | 103   | 85-115%      | --- | ---       |       |
| Matrix Spike Dup (23K0138-MSD1)                 |        |                 | Prepared: 11/03/23 08:13    Analyzed: 11/03/23 15:55 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: MW18-20231017 (A3J1449-03RE1) |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| SM 5310 C                                       |        |                 |                                                      |       |          |              |               |       |              |     |           |       |
| Total Organic Carbon                            | 315    | ---             | 20.2                                                 | mg/L  | 20       | 200          | 115           | 100   | 85-115%      | 2   | 15%       |       |

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Portland, OR 97224

Project: **OCS**Project Number: **461M114811**Project Manager: **Russ Bunker****Report ID:****A3J1449 - 11 06 23 1317**

## SAMPLE PREPARATION INFORMATION

## Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23J0824</u> |        |           |                |                |                         |                          |                   |
| A3J1449-01            | Water  | EPA 8260D | 10/17/23 12:25 | 10/20/23 14:15 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3J1449-02            | Water  | EPA 8260D | 10/17/23 11:50 | 10/20/23 14:15 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3J1449-05            | Water  | EPA 8260D | 10/17/23 12:55 | 10/20/23 14:15 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| <u>Batch: 23J0862</u> |        |           |                |                |                         |                          |                   |
| A3J1449-01RE1         | Water  | EPA 8260D | 10/17/23 12:25 | 10/23/23 11:40 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3J1449-03RE1         | Water  | EPA 8260D | 10/17/23 11:05 | 10/23/23 11:40 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |
| A3J1449-04RE1         | Water  | EPA 8260D | 10/17/23 13:20 | 10/23/23 11:40 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |

## Total Organic Carbon (Non-Purgeable) by Persulfate Oxidation by Standard Method 5310C

Prep: Method Prep: Ag

| Lab Number            | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|-----------------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| <u>Batch: 23J0785</u> |        |           |                |                |                         |                          |                   |
| A3J1449-01RE1         | Water  | SM 5310 C | 10/17/23 12:25 | 10/19/23 17:31 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3J1449-02            | Water  | SM 5310 C | 10/17/23 11:50 | 10/19/23 17:31 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| A3J1449-05            | Water  | SM 5310 C | 10/17/23 12:55 | 10/19/23 17:31 | 40mL/40mL               | 40mL/40mL                | 1.00              |
| <u>Batch: 23K0138</u> |        |           |                |                |                         |                          |                   |
| A3J1449-03RE1         | Water  | SM 5310 C | 10/17/23 11:05 | 11/03/23 08:13 | 40mL/40mL               | 40mL/40mL                | 1.00              |

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Project: **OCS**

Project Number: **461M114811**  
Project Manager: **Russ Bunker**

**Report ID:**

**A3J1449 - 11 06 23 1317**

## QUALIFIER DEFINITIONS

### Client Sample and Quality Control (QC) Sample Qualifier Definitions:

#### Apex Laboratories

- PRES** Incomplete field preservation. Additional preservative was added to adjust the pH within the appropriate range for this analysis.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +21%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +30%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +35%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +8%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -1%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -13%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.
- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -7%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-06** Reporting level raised due to possible carryover from a previous sample.
- V-01** Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
- V-13** Reporting levels raised due to dilution necessary for analysis due to sample foaming in sparge vessel.

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3J1449 - 11 06 23 1317**

### REPORTING NOTES AND CONVENTIONS:

#### Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.  
ND Analyte NOT DETECTED at or above the detection or reporting limit.  
NR Result Not Reported  
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

#### Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).  
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

#### Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

#### Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.  
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")  
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

#### QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

#### Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" \*\*\* " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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**WSP USA Environment & Infrastructure Inc.**

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**

Project Number: **461M114811**

Project Manager: **Russ Bunker**

**Report ID:**

**A3J1449 - 11 06 23 1317**

### REPORTING NOTES AND CONVENTIONS (Cont.):

#### **Blanks:**

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

#### **Preparation Notes:**

##### Mixed Matrix Samples:

##### Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

##### Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

#### **Sampling and Preservation Notes:**

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: **OCS**  
Project Number: **461M114811**  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3J1449 - 11 06 23 1317**

### LABORATORY ACCREDITATION INFORMATION

**ORELAP Certification ID: OR100062 (Primary Accreditation)** -  
**EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

#### **Apex Laboratories**

| Matrix                                                                                | Analysis | TNI_ID | Analyte | TNI_ID | Accreditation |
|---------------------------------------------------------------------------------------|----------|--------|---------|--------|---------------|
| <u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u> |          |        |         |        |               |

#### **Secondary Accreditations**

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

#### **Subcontract Laboratory Accreditations**

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.  
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

#### **Field Testing Parameters**

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

Project: OCS

15862 SW 72nd Ave. Suite 150

Project Number: 461M114811

Portland, OR 97224

Project Manager: Russ Bunker

Report ID:

A3J1449 - 11 06 23 1317

| APEX LABS                                                                            |          | CHAIN OF CUSTODY          |      | Lab # A3J1449 coc 1 of 1 |                 |
|--------------------------------------------------------------------------------------|----------|---------------------------|------|--------------------------|-----------------|
| Company: WSP                                                                         |          | Project Mgr: Russ Bunker  |      | Project #: 461M114811    |                 |
| Address: 15862 SW 72nd Ave. Suite 150 Portland, OR 97224                             |          | Phone: 503 475 4892       |      | PO #                     |                 |
| Sampled by: Jason Gardner                                                            |          | Email:                    |      |                          |                 |
| Site Location:                                                                       |          |                           |      |                          |                 |
| State: OR                                                                            |          |                           |      |                          |                 |
| County: Multnomah                                                                    |          |                           |      |                          |                 |
| SAMPLE ID                                                                            |          | DATE                      | TIME | MATRIX                   | # OF CONTAINERS |
| MW16-20231017                                                                        | 10/17/23 | 12:15                     |      |                          |                 |
| MW17-20231017                                                                        | 11/10    |                           |      |                          |                 |
| MW18-20231017                                                                        | 11/05    |                           |      |                          |                 |
| MW19-20231017                                                                        | 11/20    |                           |      |                          |                 |
| RW1-20231017                                                                         | 11/25    |                           |      |                          |                 |
| ANALYSIS REQUEST                                                                     |          |                           |      |                          |                 |
| 8270 SEMI-VOLATILES FULL LIST                                                        |          |                           |      |                          |                 |
| 8270 SIM PAHs                                                                        |          |                           |      |                          |                 |
| 8270 VOCs Full List                                                                  |          |                           |      |                          |                 |
| 8260 Halo VOCs                                                                       |          |                           |      |                          |                 |
| 8260 RBDM VOCs                                                                       |          |                           |      |                          |                 |
| 8260 BTEX                                                                            |          |                           |      |                          |                 |
| NWT-PH-GX                                                                            |          |                           |      |                          |                 |
| NWT-PH-DX                                                                            |          |                           |      |                          |                 |
| NWT-PH-HCID                                                                          |          |                           |      |                          |                 |
| MATRIX                                                                               |          |                           |      |                          |                 |
| # OF CONTAINERS                                                                      |          |                           |      |                          |                 |
| 8081 Pesticides                                                                      |          |                           |      |                          |                 |
| 8082 PCBs                                                                            |          |                           |      |                          |                 |
| 8081 Pesticides                                                                      |          |                           |      |                          |                 |
| RCRA Metals (8)                                                                      |          |                           |      |                          |                 |
| Priority Metals (13)                                                                 |          |                           |      |                          |                 |
| Al, Sb, As, Ba, Be, Bi, Cd, Cr, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, TL, V, Zn |          |                           |      |                          |                 |
| TOTAL DISS. TCLP                                                                     |          |                           |      |                          |                 |
| TCLP Metals (8)                                                                      |          |                           |      |                          |                 |
| Hold Sample                                                                          |          |                           |      |                          |                 |
| Frozen Archive                                                                       |          |                           |      |                          |                 |
| SPECIAL INSTRUCTIONS:                                                                |          |                           |      |                          |                 |
| Standard Turn Around Time (TAT) = 10 Business Days                                   |          |                           |      |                          |                 |
| TAT Requested (circle) 1 Day 2 Day 3 Day 5 Day Standard Other:                       |          |                           |      |                          |                 |
| SAMPLES ARE HELD FOR 30 DAYS                                                         |          |                           |      |                          |                 |
| RELINQUISHED BY:                                                                     |          | RECEIVED BY:              |      | RECEIVED BY:             |                 |
| Signature: [Signature]                                                               |          | Signature: [Signature]    |      | Signature: [Signature]   |                 |
| Date: 10/17/23                                                                       |          | Date: 10/17/23            |      | Date:                    |                 |
| Printed Name: Grant Busse                                                            |          | Printed Name: [Signature] |      | Printed Name:            |                 |
| Time: 14:52                                                                          |          | Time: [Signature]         |      | Time:                    |                 |
| Company: WSP                                                                         |          | Company: [Signature]      |      | Company:                 |                 |

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave, Suite 150  
Portland, OR 97224Project: OCS  
Project Number: 461M114811  
Project Manager: Russ BunkerReport ID:  
A3J1449 - 11 06 23 1317

## APEX LABS COOLER RECEIPT FORM

Client: WSP Element WO#: A3J1449Project/Project #: GCS / 461M114811

## Delivery Info:

Date/time received: 10/17/23 @ 14:52 By: KAMDelivered by: Apex ☒ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐Cooler Inspection Date/time inspected: 10/17/23 @ 14:52 By: KAMChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

|                            | Cooler #1   | Cooler #2 | Cooler #3 | Cooler #4 | Cooler #5 | Cooler #6 | Cooler #7 |
|----------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temperature (°C)           | <u>5.6</u>  |           |           |           |           |           |           |
| Custody seals? (Y/N)       | <u>N</u>    |           |           |           |           |           |           |
| Received on ice? (Y/N)     | <u>Y</u>    |           |           |           |           |           |           |
| Temp. blanks? (Y/N)        | <u>N</u>    |           |           |           |           |           |           |
| Ice type: (Gel/Real/Other) | <u>Real</u> |           |           |           |           |           |           |
| Condition (In/Out):        | <u>IN</u>   |           |           |           |           |           |           |

Cooler out of temp? (Y/N) ☒ Possible reason why:Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐Sample Inspection: Date/time inspected: 10-20-23 @ 10 06 By: DJSAll samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☒ Comments: Received a temp blank that wasn't listed on label.COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☒ No ☐ NA ☐Comments MW16-20231017 = 3/3 HS, MW18-20231017 = 3/3 HS.Water samples: pH checked: Yes ☒ No ☒ NA ☐ pH appropriate? Yes ☒ No ☒ NA ☐ pH ID: A235172Comments: MW16-20231017 ± pH=7Additional information: TB # 3415

Labeled by:

DJS

Witness:

KAM

Cooler Inspected by:

KAM ave for  
KAM 10/17/23

Form Y-003 R-01

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

Sunday, December 17, 2023

Russ Bunker

WSP USA Environment & Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

RE: A3L1059 - OCS - 361M1148

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3L1059, which was received by the laboratory on 12/7/2023 at 2:03:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.

(See Cooler Receipt Form for details)

Default Cooler    4.1    degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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503-718-2323  
ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 361M1148  
Project Manager: Russ Bunker

Report ID:  
A3L1059 - 12 17 23 2304

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

| Client Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|------------------|---------------|--------|----------------|----------------|
| MW19-20231207    | A3L1059-01    | Water  | 12/07/23 12:55 | 12/07/23 14:03 |

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

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ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **361M1148**  
Project Manager: **Russ Bunker****Report ID:**  
**A3L1059 - 12 17 23 2304**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW19-20231207 (A3L1059-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23L0632</b> |             |       |
| Acetone                              | ND            | ---             | 20.0            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Acrylonitrile                        | ND            | ---             | 2.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Benzene                              | ND            | ---             | 0.200           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Bromobenzene                         | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Bromochloromethane                   | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Bromodichloromethane                 | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Bromoform                            | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Bromomethane                         | ND            | ---             | 5.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 2-Butanone (MEK)                     | ND            | ---             | 10.0            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| n-Butylbenzene                       | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| sec-Butylbenzene                     | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| tert-Butylbenzene                    | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Carbon disulfide                     | ND            | ---             | 10.0            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Carbon tetrachloride                 | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Chlorobenzene                        | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Chloroethane                         | ND            | ---             | 5.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Chloroform                           | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Chloromethane                        | ND            | ---             | 5.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 2-Chlorotoluene                      | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 4-Chlorotoluene                      | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Dibromochloromethane                 | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2-Dibromo-3-chloropropane          | ND            | ---             | 5.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2-Dibromoethane (EDB)              | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Dibromomethane                       | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2-Dichlorobenzene                  | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,3-Dichlorobenzene                  | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,4-Dichlorobenzene                  | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Dichlorodifluoromethane              | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1-Dichloroethane                   | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2-Dichloroethane (EDC)             | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1-Dichloroethene                   | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| <b>cis-1,2-Dichloroethene</b>        | <b>3.31</b>   | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| trans-1,2-Dichloroethene             | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323  
ORELAP ID: OR100062WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **361M1148**  
Project Manager: **Russ Bunker****Report ID:**  
**A3L1059 - 12 17 23 2304**

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                              | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref. | Notes |
|--------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|-------------|-------|
| <b>MW19-20231207 (A3L1059-01RE1)</b> |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23L0632</b> |             |       |
| 1,2-Dichloropropane                  | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,3-Dichloropropane                  | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 2,2-Dichloropropane                  | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1-Dichloropropene                  | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| cis-1,3-Dichloropropene              | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| trans-1,3-Dichloropropene            | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Ethylbenzene                         | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Hexachlorobutadiene                  | ND            | ---             | 5.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 2-Hexanone                           | ND            | ---             | 10.0            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Isopropylbenzene                     | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 4-Isopropyltoluene                   | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Methylene chloride                   | ND            | ---             | 10.0            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 4-Methyl-2-pentanone (MiBK)          | ND            | ---             | 10.0            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Methyl tert-butyl ether (MTBE)       | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Naphthalene                          | ND            | ---             | 5.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| n-Propylbenzene                      | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Styrene                              | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1,1,2-Tetrachloroethane            | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1,2,2-Tetrachloroethane            | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Tetrachloroethene (PCE)              | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Toluene                              | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2,3-Trichlorobenzene               | ND            | ---             | 2.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2,4-Trichlorobenzene               | ND            | ---             | 2.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1,1-Trichloroethane                | ND            | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,1,2-Trichloroethane                | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| <b>Trichloroethene (TCE)</b>         | <b>4.12</b>   | ---             | 0.400           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Trichlorofluoromethane               | ND            | ---             | 2.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2,3-Trichloropropane               | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,2,4-Trimethylbenzene               | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| 1,3,5-Trimethylbenzene               | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| Vinyl chloride                       | ND            | ---             | 0.200           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| m,p-Xylene                           | ND            | ---             | 1.00            | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |
| o-Xylene                             | ND            | ---             | 0.500           | ug/L                 | 1        | 12/16/23 13:12        | EPA 8260D   |       |

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

WSP USA Environment & Infrastructure Inc.  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: OCS  
Project Number: 361M1148  
Project Manager: Russ Bunker

**Report ID:**  
A3L1059 - 12 17 23 2304

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

| Analyte                               | Sample Result | Detection Limit | Reporting Limit | Units                | Dilution | Date Analyzed         | Method Ref.    | Notes     |
|---------------------------------------|---------------|-----------------|-----------------|----------------------|----------|-----------------------|----------------|-----------|
| <b>MW19-20231207 (A3L1059-01RE1)</b>  |               |                 |                 | <b>Matrix: Water</b> |          | <b>Batch: 23L0632</b> |                |           |
| Surrogate: 1,4-Difluorobenzene (Surr) |               | Recovery:       | 105 %           | Limits:              | 80-120 % | 1                     | 12/16/23 13:12 | EPA 8260D |
| Toluene-d8 (Surr)                     |               |                 | 99 %            |                      | 80-120 % | 1                     | 12/16/23 13:12 | EPA 8260D |
| 4-Bromofluorobenzene (Surr)           |               |                 | 100 %           |                      | 80-120 % | 1                     | 12/16/23 13:12 | EPA 8260D |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23L0456-BLK1)        |        |                 | Prepared: 12/13/23 09:36 |       | Analyzed: 12/13/23 12:21 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                                                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------------------------------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C                                                      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| Blank (23L0456-BLK1)                                                           |        |                 |                 |       |          | Prepared: 12/13/23 09:36 Analyzed: 12/13/23 12:21 |               |       |              |     |           |       |
| 1,2-Dichloropropane                                                            | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene                                                      | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                                                                   | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene                                                            | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                                                                     | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                                                               | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene                                                             | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride                                                             | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)                                                    | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)                                                 | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                                                                    | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                                                                | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Styrene                                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane                                                      | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane                                                      | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)                                                        | ND     | ---             | 0.200           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Toluene                                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene                                                         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene                                                         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane                                                          | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane                                                          | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)                                                          | ND     | ---             | 0.200           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane                                                         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane                                                         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene                                                         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene                                                         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                                                                 | ND     | ---             | 0.200           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                                                                     | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                                                                       | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) Recovery: 104 % Limits: 80-120 % Dilution: 1x |        |                 |                 |       |          |                                                   |               |       |              |     |           |       |

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## ANALYTICAL REPORT

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Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                      | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C    |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23L0456-BLK1)         |        |                 | Prepared: 12/13/23 09:36 |                  | Analyzed: 12/13/23 12:21 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)      |        | Recovery: 100 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromo fluorobenzene (Surr) |        | 99 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23L0456-BS1)            |        |                 | Prepared: 12/13/23 09:36 |                  | Analyzed: 12/13/23 11:30 |              |               |       |              |     |           |       |
| EPA 8260D                    |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                      | 35.2   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 88    | 80-120%      | --- | ---       | Q-55  |
| Acrylonitrile                | 18.3   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |       |
| Benzene                      | 20.1   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                 | 20.0   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromochloromethane           | 19.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 99    | 80-120%      | --- | ---       |       |
| Bromodichloromethane         | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Bromoform                    | 23.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 117   | 80-120%      | --- | ---       |       |
| Bromomethane                 | 18.2   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 91    | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)             | 38.5   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 96    | 80-120%      | --- | ---       |       |
| n-Butylbenzene               | 21.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene             | 21.9   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 110   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene            | 20.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Carbon disulfide             | 15.4   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 77    | 80-120%      | --- | ---       |       |
| Carbon tetrachloride         | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| Chlorobenzene                | 20.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Chloroethane                 | 17.4   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 87    | 80-120%      | --- | ---       |       |
| Chloroform                   | 21.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| Chloromethane                | 17.7   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 89    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene              | 20.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene              | 21.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| Dibromochloromethane         | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane  | 18.8   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)      | 20.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Dibromomethane               | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene          | 20.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene          | 21.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene          | 19.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane      | 18.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane           | 19.4   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 97    | 80-120%      | --- | ---       |       |

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Project: **OCS**Project Number: **361M1148**Project Manager: **Russ Bunker****Report ID:****A3L1059 - 12 17 23 2304****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

| Analyte                          | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| <b>Batch 23L0456 - EPA 5030C</b> |        |                 |                 |       |          | <b>Water</b>                                      |               |       |              |     |           |       |
| <b>LCS (23L0456-BS1)</b>         |        |                 |                 |       |          | Prepared: 12/13/23 09:36 Analyzed: 12/13/23 11:30 |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)         | 21.4   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene               | 17.3   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 87    | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene           | 18.5   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 93    | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene         | 17.1   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 86    | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane              | 19.1   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane              | 19.4   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 97    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane              | 20.3   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene              | 19.2   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene          | 19.7   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 98    | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene        | 21.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| Ethylbenzene                     | 21.1   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene              | 19.1   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| 2-Hexanone                       | 33.8   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 85    | 80-120%      | --- | ---       |       |
| Isopropylbenzene                 | 21.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 109   | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene               | 20.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| Methylene chloride               | 17.5   | ---             | 10.0            | ug/L  | 1        | 20.0                                              | ---           | 88    | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)      | 35.7   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 89    | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)   | 17.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 88    | 80-120%      | --- | ---       |       |
| Naphthalene                      | 16.5   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 83    | 80-120%      | --- | ---       |       |
| n-Propylbenzene                  | 20.7   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| Styrene                          | 21.5   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane        | 20.5   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane        | 20.7   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)          | 20.5   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| Toluene                          | 19.9   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 100   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene           | 20.6   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene           | 18.8   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 94    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane            | 20.7   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane            | 21.2   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)            | 19.7   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane           | 21.2   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichloropropane           | 21.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene           | 22.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 113   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene           | 21.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 109   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director



## ANALYTICAL REPORT

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23L0456-BS1)                |        |                 | Prepared: 12/13/23 09:36 |                  | Analyzed: 12/13/23 11:30 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 16.9   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 85    | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 45.6   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 114   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 20.3   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 102   | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 103 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 96 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23L0456-DUP1)

Prepared: 12/13/23 09:38 Analyzed: 12/13/23 19:08

## QC Source Sample: Non-SDG (A3L1036-02)

|                             |    |     |       |      |     |     |      |     |     |     |     |
|-----------------------------|----|-----|-------|------|-----|-----|------|-----|-----|-----|-----|
| Acetone                     | ND | --- | 10000 | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Acrylonitrile               | ND | --- | 1000  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Benzene                     | ND | --- | 100   | ug/L | 500 | --- | 55.0 | --- | --- | *** | 30% |
| Bromobenzene                | ND | --- | 250   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Bromochloromethane          | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Bromoform                   | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Bromomethane                | ND | --- | 2500  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | --- | 5000  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Carbon disulfide            | ND | --- | 5000  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Chlorobenzene               | ND | --- | 250   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Chloroethane                | ND | --- | 2500  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Chloroform                  | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Chloromethane               | ND | --- | 2500  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | --- | 2500  | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | --- | 250   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| Dibromomethane              | ND | --- | 500   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND | --- | 250   | ug/L | 500 | --- | ND   | --- | --- | --- | 30% |

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Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit                                     | Units | Dilution | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-----------------------------------------------------|-------|----------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C              |        |                 |                                                     |       |          | Water        |               |       |              |     |           |       |
| Duplicate (23L0456-DUP1)               |        |                 | Prepared: 12/13/23 09:38   Analyzed: 12/13/23 19:08 |       |          |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1036-02) |        |                 |                                                     |       |          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                    | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                    | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                     | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)               | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                     | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,2-Dichloroethene                 | 2660   | ---             | 200                                                 | ug/L  | 500      | ---          | 2700          | ---   | ---          | 1   | 30%       |       |
| trans-1,2-Dichloroethene               | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloropropane                    | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                    | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                    | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                    | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene              | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                           | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                    | ND     | ---             | 2500                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                             | ND     | ---             | 5000                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                       | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                     | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                     | ND     | ---             | 5000                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)            | ND     | ---             | 5000                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                            | ND     | ---             | 2500                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                        | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                | ND     | ---             | 500                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                 | ND     | ---             | 1000                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                 | ND     | ---             | 1000                                                | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                  | ND     | ---             | 200                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                  | ND     | ---             | 250                                                 | ug/L  | 500      | ---          | ND            | ---   | ---          | --- | 30%       |       |

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                                                                       | Result | Detection Limit | Reporting Limit                                     | Units | Dilution | Spike Amount                                        | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------------------------------------------------------------------------|--------|-----------------|-----------------------------------------------------|-------|----------|-----------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C                                                                     |        |                 |                                                     |       |          | Water                                               |               |       |              |     |           |       |
| Duplicate (23L0456-DUP1)                                                                      |        |                 | Prepared: 12/13/23 09:38   Analyzed: 12/13/23 19:08 |       |          |                                                     |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1036-02)                                                        |        |                 |                                                     |       |          |                                                     |               |       |              |     |           |       |
| Trichloroethene (TCE)                                                                         | ND     | ---             | 200                                                 | ug/L  | 500      | ---                                                 | 175           | ---   | ---          | *** | 30%       |       |
| Trichlorofluoromethane                                                                        | ND     | ---             | 1000                                                | ug/L  | 500      | ---                                                 | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                                                                        | ND     | ---             | 500                                                 | ug/L  | 500      | ---                                                 | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                                                                        | ND     | ---             | 500                                                 | ug/L  | 500      | ---                                                 | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                                                                        | ND     | ---             | 500                                                 | ug/L  | 500      | ---                                                 | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                                                                                | 500    | ---             | 100                                                 | ug/L  | 500      | ---                                                 | 510           | ---   | ---          | 2   | 30%       |       |
| m,p-Xylene                                                                                    | ND     | ---             | 500                                                 | ug/L  | 500      | ---                                                 | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                                                                                      | ND     | ---             | 250                                                 | ug/L  | 500      | ---                                                 | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)      Recovery: 104 %      Limits: 80-120 %      Dilution: 1x |        |                 |                                                     |       |          |                                                     |               |       |              |     |           |       |
| Toluene-d8 (Surr)                                                                             |        |                 | 99 %                                                |       | 80-120 % |                                                     | "             |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)                                                                   |        |                 | 100 %                                               |       | 80-120 % |                                                     | "             |       |              |     |           |       |
| Matrix Spike (23L0456-MS1)                                                                    |        |                 |                                                     |       |          | Prepared: 12/13/23 09:38   Analyzed: 12/13/23 21:23 |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1017-02)                                                        |        |                 |                                                     |       |          |                                                     |               |       |              |     |           |       |
| EPA 8260D                                                                                     |        |                 |                                                     |       |          |                                                     |               |       |              |     |           |       |
| Acetone                                                                                       | 40.0   | ---             | 20.0                                                | ug/L  | 1        | 40.0                                                | ND            | 100   | 39-160%      | --- | ---       |       |
| Acrylonitrile                                                                                 | 16.8   | ---             | 2.00                                                | ug/L  | 1        | 20.0                                                | ND            | 84    | 63-135%      | --- | ---       |       |
| Benzene                                                                                       | 19.8   | ---             | 0.200                                               | ug/L  | 1        | 20.0                                                | ND            | 99    | 79-120%      | --- | ---       |       |
| Bromobenzene                                                                                  | 19.4   | ---             | 0.500                                               | ug/L  | 1        | 20.0                                                | ND            | 97    | 80-120%      | --- | ---       |       |
| Bromochloromethane                                                                            | 18.7   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 93    | 78-123%      | --- | ---       |       |
| Bromodichloromethane                                                                          | 20.9   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 104   | 79-125%      | --- | ---       |       |
| Bromoform                                                                                     | 22.6   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 113   | 66-130%      | --- | ---       |       |
| Bromomethane                                                                                  | 18.4   | ---             | 5.00                                                | ug/L  | 1        | 20.0                                                | ND            | 92    | 53-141%      | --- | ---       |       |
| 2-Butanone (MEK)                                                                              | 35.3   | ---             | 10.0                                                | ug/L  | 1        | 40.0                                                | ND            | 88    | 56-143%      | --- | ---       |       |
| n-Butylbenzene                                                                                | 21.5   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 107   | 75-128%      | --- | ---       |       |
| sec-Butylbenzene                                                                              | 22.5   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 113   | 77-126%      | --- | ---       |       |
| tert-Butylbenzene                                                                             | 20.6   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 103   | 78-124%      | --- | ---       |       |
| Carbon disulfide                                                                              | 16.7   | ---             | 10.0                                                | ug/L  | 1        | 20.0                                                | ND            | 84    | 64-133%      | --- | ---       | Q-54a |
| Carbon tetrachloride                                                                          | 24.1   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 121   | 72-136%      | --- | ---       |       |
| Chlorobenzene                                                                                 | 20.4   | ---             | 0.500                                               | ug/L  | 1        | 20.0                                                | ND            | 102   | 80-120%      | --- | ---       |       |
| Chloroethane                                                                                  | 18.2   | ---             | 5.00                                                | ug/L  | 1        | 20.0                                                | ND            | 91    | 60-138%      | --- | ---       |       |
| Chloroform                                                                                    | 21.1   | ---             | 1.00                                                | ug/L  | 1        | 20.0                                                | ND            | 106   | 79-124%      | --- | ---       |       |
| Chloromethane                                                                                 | 18.4   | ---             | 5.00                                                | ug/L  | 1        | 20.0                                                | ND            | 92    | 50-139%      | --- | ---       |       |

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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23L0456-MS1)             |        |                 | Prepared: 12/13/23 09:38 |       | Analyzed: 12/13/23 21:23 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1017-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 2-Chlorotoluene                        | 19.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 99    | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 20.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 103   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 20.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 17.2   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 86    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 20.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 100   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 20.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 22.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 1.88          | 101   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 21.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 0.360         | 104   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 1.64          | 95    | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 23.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 118   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 19.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 97    | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 20.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 103   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 19.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 98    | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 18.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 91    | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 17.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 89    | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 18.5   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 92    | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 18.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 93    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 20.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 20.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 15.5   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 77    | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 19.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 99    | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 21.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 107   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 18.8   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 94    | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 30.4   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 76    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 22.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 113   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 20.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 16.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 83    | 74-124%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)            | 32.3   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 81    | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 16.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 82    | 71-124%      | --- | ---       |       |
| Naphthalene                            | 14.5   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 73    | 61-128%      | --- | ---       |       |
| n-Propylbenzene                        | 20.8   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 104   | 76-126%      | --- | ---       |       |
| Styrene                                | 21.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 20.3   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 102   | 78-124%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23L0456-MS1)             |        |                 | Prepared: 12/13/23 09:38 |                  | Analyzed: 12/13/23 21:23 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1017-02) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,1,2,2-Tetrachloroethane              | 19.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 97    | 71-121%      | --- | ---       |       |
| Tetrachloroethene (PCE)                | 24.3   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | 2.28          | 110   | 74-129%      | --- | ---       |       |
| Toluene                                | 20.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 100   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 19.0   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 95    | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 17.2   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 86    | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 22.4   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 112   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 20.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 103   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 23.2   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | 2.73          | 102   | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 25.5   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 128   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 19.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 98    | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 22.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 110   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 109   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 18.8   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ND            | 94    | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 46.5   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ND            | 116   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 19.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 100   | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 103 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 93 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Matrix Spike Dup (23L0456-MSD1)

Prepared: 12/13/23 09:38 Analyzed: 12/13/23 21:46

## QC Source Sample: Non-SDG (A3L1017-02)

|                      |      |     |       |      |   |      |    |     |         |   |     |  |
|----------------------|------|-----|-------|------|---|------|----|-----|---------|---|-----|--|
| Acetone              | 40.8 | --- | 20.0  | ug/L | 1 | 40.0 | ND | 102 | 39-160% | 2 | 30% |  |
| Acrylonitrile        | 17.8 | --- | 2.00  | ug/L | 1 | 20.0 | ND | 89  | 63-135% | 5 | 30% |  |
| Benzene              | 21.0 | --- | 0.200 | ug/L | 1 | 20.0 | ND | 105 | 79-120% | 6 | 30% |  |
| Bromobenzene         | 21.1 | --- | 0.500 | ug/L | 1 | 20.0 | ND | 106 | 80-120% | 8 | 30% |  |
| Bromochloromethane   | 19.5 | --- | 1.00  | ug/L | 1 | 20.0 | ND | 97  | 78-123% | 4 | 30% |  |
| Bromodichloromethane | 21.6 | --- | 1.00  | ug/L | 1 | 20.0 | ND | 108 | 79-125% | 3 | 30% |  |
| Bromoform            | 23.9 | --- | 1.00  | ug/L | 1 | 20.0 | ND | 120 | 66-130% | 6 | 30% |  |
| Bromomethane         | 18.2 | --- | 5.00  | ug/L | 1 | 20.0 | ND | 91  | 53-141% | 1 | 30% |  |
| 2-Butanone (MEK)     | 36.4 | --- | 10.0  | ug/L | 1 | 40.0 | ND | 91  | 56-143% | 3 | 30% |  |
| n-Butylbenzene       | 23.4 | --- | 1.00  | ug/L | 1 | 20.0 | ND | 117 | 75-128% | 9 | 30% |  |
| sec-Butylbenzene     | 24.5 | --- | 1.00  | ug/L | 1 | 20.0 | ND | 123 | 77-126% | 9 | 30% |  |
| tert-Butylbenzene    | 22.3 | --- | 1.00  | ug/L | 1 | 20.0 | ND | 112 | 78-124% | 8 | 30% |  |

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

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15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: **OCS**Project Number: **361M1148**Project Manager: **Russ Bunker****Report ID:****A3L1059 - 12 17 23 2304****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike Dup (23L0456-MSD1)        |        |                 | Prepared: 12/13/23 09:38 |       | Analyzed: 12/13/23 21:46 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1017-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Carbon disulfide                       | 17.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 88    | 64-133%      | 5   | 30%       | Q-54a |
| Carbon tetrachloride                   | 25.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 126   | 72-136%      | 5   | 30%       |       |
| Chlorobenzene                          | 21.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 109   | 80-120%      | 6   | 30%       |       |
| Chloroethane                           | 18.0   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 90    | 60-138%      | 1   | 30%       |       |
| Chloroform                             | 21.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 109   | 79-124%      | 4   | 30%       |       |
| Chloromethane                          | 19.4   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 97    | 50-139%      | 5   | 30%       |       |
| 2-Chlorotoluene                        | 21.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 109   | 79-122%      | 9   | 30%       |       |
| 4-Chlorotoluene                        | 22.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 78-122%      | 8   | 30%       |       |
| Dibromochloromethane                   | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 74-126%      | 6   | 30%       |       |
| 1,2-Dibromo-3-chloropropane            | 18.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 94    | 62-128%      | 8   | 30%       |       |
| 1,2-Dibromoethane (EDB)                | 21.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 106   | 77-121%      | 5   | 30%       |       |
| Dibromomethane                         | 21.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 109   | 79-123%      | 5   | 30%       |       |
| 1,2-Dichlorobenzene                    | 23.9   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 1.88          | 110   | 80-120%      | 8   | 30%       |       |
| 1,3-Dichlorobenzene                    | 22.9   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 0.360         | 113   | 80-120%      | 8   | 30%       |       |
| 1,4-Dichlorobenzene                    | 22.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | 1.64          | 103   | 79-120%      | 7   | 30%       |       |
| Dichlorodifluoromethane                | 25.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 127   | 32-152%      | 7   | 30%       |       |
| 1,1-Dichloroethane                     | 20.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 100   | 77-125%      | 3   | 30%       |       |
| 1,2-Dichloroethane (EDC)               | 21.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 107   | 73-128%      | 4   | 30%       |       |
| 1,1-Dichloroethene                     | 20.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 103   | 71-131%      | 5   | 30%       |       |
| cis-1,2-Dichloroethene                 | 19.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 99    | 78-123%      | 8   | 30%       |       |
| trans-1,2-Dichloroethene               | 18.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 93    | 75-124%      | 4   | 30%       |       |
| 1,2-Dichloropropane                    | 19.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 96    | 78-122%      | 4   | 30%       |       |
| 1,3-Dichloropropane                    | 19.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 98    | 80-120%      | 6   | 30%       |       |
| 2,2-Dichloropropane                    | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 60-139%      | 4   | 30%       |       |
| 1,1-Dichloropropene                    | 22.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 79-125%      | 6   | 30%       |       |
| cis-1,3-Dichloropropene                | 16.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 84    | 75-124%      | 8   | 30%       |       |
| trans-1,3-Dichloropropene              | 21.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 73-127%      | 6   | 30%       |       |
| Ethylbenzene                           | 22.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 114   | 79-121%      | 6   | 30%       |       |
| Hexachlorobutadiene                    | 20.4   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 66-134%      | 8   | 30%       |       |
| 2-Hexanone                             | 31.9   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 80    | 57-139%      | 5   | 30%       |       |
| Isopropylbenzene                       | 24.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 122   | 72-131%      | 7   | 30%       |       |
| 4-Isopropyltoluene                     | 22.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 114   | 77-127%      | 9   | 30%       |       |
| Methylene chloride                     | 17.0   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 85    | 74-124%      | 2   | 30%       |       |

Apex Laboratories

Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0456 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike Dup (23L0456-MSD1)        |        |                 | Prepared: 12/13/23 09:38 |       | Analyzed: 12/13/23 21:46 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1017-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 4-Methyl-2-pentanone (MiBK)            | 34.4   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 86    | 67-130%      | 6   | 30%       |       |
| Methyl tert-butyl ether (MTBE)         | 17.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 85    | 71-124%      | 5   | 30%       |       |
| Naphthalene                            | 16.6   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 83    | 61-128%      | 14  | 30%       |       |
| n-Propylbenzene                        | 22.4   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 112   | 76-126%      | 7   | 30%       |       |
| Styrene                                | 22.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 78-123%      | 6   | 30%       |       |
| 1,1,1,2-Tetrachloroethane              | 21.8   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 109   | 78-124%      | 7   | 30%       |       |
| 1,1,2,2-Tetrachloroethane              | 20.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 103   | 71-121%      | 6   | 30%       |       |
| Tetrachloroethene (PCE)                | 26.0   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | 2.28          | 119   | 74-129%      | 7   | 30%       |       |
| Toluene                                | 21.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 80-121%      | 6   | 30%       |       |
| 1,2,3-Trichlorobenzene                 | 20.9   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 69-129%      | 9   | 30%       |       |
| 1,2,4-Trichlorobenzene                 | 19.3   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 96    | 69-130%      | 12  | 30%       |       |
| 1,1,1-Trichloroethane                  | 23.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 118   | 74-131%      | 5   | 30%       |       |
| 1,1,2-Trichloroethane                  | 21.5   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 107   | 80-120%      | 4   | 30%       |       |
| Trichloroethene (TCE)                  | 24.4   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | 2.73          | 108   | 79-123%      | 5   | 30%       |       |
| Trichlorofluoromethane                 | 26.4   | ---             | 2.00                     | ug/L  | 1                        | 20.0         | ND            | 132   | 65-141%      | 3   | 30%       |       |
| 1,2,3-Trichloropropane                 | 20.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 73-122%      | 6   | 30%       |       |
| 1,2,4-Trimethylbenzene                 | 23.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 119   | 76-124%      | 7   | 30%       |       |
| 1,3,5-Trimethylbenzene                 | 23.4   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 117   | 75-124%      | 7   | 30%       |       |
| Vinyl chloride                         | 20.3   | ---             | 0.200                    | ug/L  | 1                        | 20.0         | ND            | 102   | 58-137%      | 8   | 30%       |       |
| m,p-Xylene                             | 49.6   | ---             | 1.00                     | ug/L  | 1                        | 40.0         | ND            | 124   | 80-121%      | 7   | 30%       | Q-01  |
| o-Xylene                               | 21.6   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 108   | 78-122%      | 8   | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery:       |                          | 102 % | Limits: 80-120 %         |              | Dilution: 1x  |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        |                 |                          | 94 %  | 80-120 %                 |              | "             |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        |                 |                          | 95 %  | 80-120 %                 |              | "             |       |              |     |           |       |

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
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503-718-2323  
ORELAP ID: OR100062**WSP USA Environment & Infrastructure Inc.**  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224Project: **OCS**  
Project Number: **361M1148**  
Project Manager: **Russ Bunker****Report ID:**  
**A3L1059 - 12 17 23 2304****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C   |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Blank (23L0632-BLK1)        |        |                 | Prepared: 12/16/23 10:04 |       | Analyzed: 12/16/23 12:27 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| Acetone                     | ND     | ---             | 20.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Acrylonitrile               | ND     | ---             | 2.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Benzene                     | ND     | ---             | 0.200                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromobenzene                | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromochloromethane          | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromodichloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromoform                   | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Bromomethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Butanone (MEK)            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| n-Butylbenzene              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| sec-Butylbenzene            | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| tert-Butylbenzene           | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon disulfide            | ND     | ---             | 10.0                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Carbon tetrachloride        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chlorobenzene               | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroethane                | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloroform                  | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Chloromethane               | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 2-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 4-Chlorotoluene             | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromochloromethane        | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | ND     | ---             | 5.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dibromomethane              | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,4-Dichlorobenzene         | ND     | ---             | 0.500                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| Dichlorodifluoromethane     | ND     | ---             | 1.00                     | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethane          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,2-Dichloroethane (EDC)    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloroethene          | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| cis-1,2-Dichloroethene      | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |
| trans-1,2-Dichloroethene    | ND     | ---             | 0.400                    | ug/L  | 1                        | ---          | ---           | ---   | ---          | --- | ---       |       |

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## ANALYTICAL REPORT

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Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                                                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------------------------------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C                                                      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| Blank (23L0632-BLK1)                                                           |        |                 |                 |       |          | Prepared: 12/16/23 10:04 Analyzed: 12/16/23 12:27 |               |       |              |     |           |       |
| 1,2-Dichloropropane                                                            | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3-Dichloropropane                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2,2-Dichloropropane                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1-Dichloropropene                                                            | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| cis-1,3-Dichloropropene                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| trans-1,3-Dichloropropene                                                      | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Ethylbenzene                                                                   | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Hexachlorobutadiene                                                            | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 2-Hexanone                                                                     | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Isopropylbenzene                                                               | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Isopropyltoluene                                                             | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methylene chloride                                                             | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)                                                    | ND     | ---             | 10.0            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)                                                 | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Naphthalene                                                                    | ND     | ---             | 5.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| n-Propylbenzene                                                                | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Styrene                                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane                                                      | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane                                                      | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Tetrachloroethene (PCE)                                                        | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Toluene                                                                        | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichlorobenzene                                                         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trichlorobenzene                                                         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,1-Trichloroethane                                                          | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,1,2-Trichloroethane                                                          | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichloroethene (TCE)                                                          | ND     | ---             | 0.400           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Trichlorofluoromethane                                                         | ND     | ---             | 2.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,3-Trichloropropane                                                         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,2,4-Trimethylbenzene                                                         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| 1,3,5-Trimethylbenzene                                                         | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Vinyl chloride                                                                 | ND     | ---             | 0.200           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| m,p-Xylene                                                                     | ND     | ---             | 1.00            | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| o-Xylene                                                                       | ND     | ---             | 0.500           | ug/L  | 1        | ---                                               | ---           | ---   | ---          | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x |        |                 |                 |       |          |                                                   |               |       |              |     |           |       |

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## ANALYTICAL REPORT

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WSP USA Environment &amp; Infrastructure Inc.

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Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                     | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C   |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Blank (23L0632-BLK1)        |        |                 | Prepared: 12/16/23 10:04 |                  | Analyzed: 12/16/23 12:27 |              |               |       |              |     |           |       |
| Surr: Toluene-d8 (Surr)     |        | Recovery: 100 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr) |        | 100 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| LCS (23L0632-BS1)           |        |                 | Prepared: 12/16/23 10:04 |                  | Analyzed: 12/16/23 11:37 |              |               |       |              |     |           |       |
| EPA 8260D                   |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Acetone                     | 42.1   | ---             | 20.0                     | ug/L             | 1                        | 40.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Acrylonitrile               | 18.7   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ---           | 93    | 80-120%      | --- | ---       |       |
| Benzene                     | 20.1   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromobenzene                | 20.1   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Bromochloromethane          | 20.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 100   | 80-120%      | --- | ---       |       |
| Bromodichloromethane        | 21.1   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 106   | 80-120%      | --- | ---       |       |
| Bromoform                   | 23.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| Bromomethane                | 22.5   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 113   | 80-120%      | --- | ---       |       |
| 2-Butanone (MEK)            | 39.0   | ---             | 10.0                     | ug/L             | 1                        | 40.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| n-Butylbenzene              | 22.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 112   | 80-120%      | --- | ---       |       |
| sec-Butylbenzene            | 23.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 116   | 80-120%      | --- | ---       |       |
| tert-Butylbenzene           | 21.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Carbon disulfide            | 21.0   | ---             | 10.0                     | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Carbon tetrachloride        | 23.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 117   | 80-120%      | --- | ---       |       |
| Chlorobenzene               | 20.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| Chloroethane                | 21.6   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Chloroform                  | 21.6   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 108   | 80-120%      | --- | ---       |       |
| Chloromethane               | 18.4   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 92    | 80-120%      | --- | ---       |       |
| 2-Chlorotoluene             | 20.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| 4-Chlorotoluene             | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 109   | 80-120%      | --- | ---       |       |
| Dibromochloromethane        | 21.5   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane | 17.4   | ---             | 5.00                     | ug/L             | 1                        | 20.0         | ---           | 87    | 80-120%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)     | 20.7   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 104   | 80-120%      | --- | ---       |       |
| Dibromomethane              | 21.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,2-Dichlorobenzene         | 20.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene         | 21.4   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene         | 20.3   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 101   | 80-120%      | --- | ---       |       |
| Dichlorodifluoromethane     | 21.4   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethane          | 20.5   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |

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Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                        | Result | Detection Limit | Reporting Limit | Units | Dilution | Spike Amount                                      | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|-----------------|-------|----------|---------------------------------------------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C      |        |                 |                 |       |          | Water                                             |               |       |              |     |           |       |
| LCS (23L0632-BS1)              |        |                 |                 |       |          | Prepared: 12/16/23 10:04 Analyzed: 12/16/23 11:37 |               |       |              |     |           |       |
| 1,2-Dichloroethane (EDC)       | 21.5   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 107   | 80-120%      | --- | ---       |       |
| 1,1-Dichloroethene             | 23.2   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 116   | 80-120%      | --- | ---       |       |
| cis-1,2-Dichloroethene         | 19.2   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 96    | 80-120%      | --- | ---       |       |
| trans-1,2-Dichloroethene       | 22.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 110   | 80-120%      | --- | ---       |       |
| 1,2-Dichloropropane            | 19.3   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 97    | 80-120%      | --- | ---       |       |
| 1,3-Dichloropropane            | 19.5   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 97    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane            | 20.7   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 103   | 80-120%      | --- | ---       |       |
| 1,1-Dichloropropene            | 20.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 104   | 80-120%      | --- | ---       |       |
| cis-1,3-Dichloropropene        | 19.4   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 97    | 80-120%      | --- | ---       |       |
| trans-1,3-Dichloropropene      | 21.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| Ethylbenzene                   | 22.0   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 110   | 80-120%      | --- | ---       |       |
| Hexachlorobutadiene            | 20.5   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| 2-Hexanone                     | 34.0   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 85    | 80-120%      | --- | ---       |       |
| Isopropylbenzene               | 22.7   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 114   | 80-120%      | --- | ---       |       |
| 4-Isopropyltoluene             | 21.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 108   | 80-120%      | --- | ---       |       |
| Methylene chloride             | 21.4   | ---             | 10.0            | ug/L  | 1        | 20.0                                              | ---           | 107   | 80-120%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)    | 36.7   | ---             | 10.0            | ug/L  | 1        | 40.0                                              | ---           | 92    | 80-120%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE) | 19.7   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| Naphthalene                    | 14.8   | ---             | 5.00            | ug/L  | 1        | 20.0                                              | ---           | 74    | 80-120%      | --- | ---       | Q-55  |
| n-Propylbenzene                | 21.8   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 109   | 80-120%      | --- | ---       |       |
| Styrene                        | 21.3   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 106   | 80-120%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane      | 21.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,1,2,2-Tetrachloroethane      | 20.3   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| Tetrachloroethene (PCE)        | 22.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 110   | 80-120%      | --- | ---       |       |
| Toluene                        | 20.8   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 104   | 80-120%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene         | 19.9   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 99    | 80-120%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene         | 17.9   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 90    | 80-120%      | --- | ---       |       |
| 1,1,1-Trichloroethane          | 22.0   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 110   | 80-120%      | --- | ---       |       |
| 1,1,2-Trichloroethane          | 21.4   | ---             | 0.500           | ug/L  | 1        | 20.0                                              | ---           | 107   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)          | 20.4   | ---             | 0.400           | ug/L  | 1        | 20.0                                              | ---           | 102   | 80-120%      | --- | ---       |       |
| Trichlorofluoromethane         | 26.1   | ---             | 2.00            | ug/L  | 1        | 20.0                                              | ---           | 131   | 80-120%      | --- | ---       | Q-56  |
| 1,2,3-Trichloropropane         | 21.0   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 105   | 80-120%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene         | 23.1   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 116   | 80-120%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene         | 22.6   | ---             | 1.00            | ug/L  | 1        | 20.0                                              | ---           | 113   | 80-120%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                          | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C        |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| LCS (23L0632-BS1)                |        |                 | Prepared: 12/16/23 10:04 |                  | Analyzed: 12/16/23 11:37 |              |               |       |              |     |           |       |
| Vinyl chloride                   | 19.6   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ---           | 98    | 80-120%      | --- | ---       |       |
| m,p-Xylene                       | 48.0   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ---           | 120   | 80-120%      | --- | ---       |       |
| o-Xylene                         | 20.5   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ---           | 103   | 80-120%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr) |        | Recovery: 100 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                |        | 96 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)      |        | 95 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

## Duplicate (23L0632-DUP1)

Prepared: 12/16/23 10:04 Analyzed: 12/16/23 19:34

## QC Source Sample: Non-SDG (A3L1036-13RE1)

|                             |    |     |      |      |    |     |    |     |     |     |     |
|-----------------------------|----|-----|------|------|----|-----|----|-----|-----|-----|-----|
| Acetone                     | ND | --- | 400  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Acrylonitrile               | ND | --- | 40.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Benzene                     | ND | --- | 4.00 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Bromobenzene                | ND | --- | 10.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Bromochloromethane          | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Bromodichloromethane        | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Bromoform                   | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Bromomethane                | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| 2-Butanone (MEK)            | ND | --- | 200  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| n-Butylbenzene              | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| sec-Butylbenzene            | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| tert-Butylbenzene           | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Carbon disulfide            | ND | --- | 200  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Carbon tetrachloride        | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Chlorobenzene               | ND | --- | 10.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Chloroethane                | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Chloroform                  | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Chloromethane               | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| 2-Chlorotoluene             | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| 4-Chlorotoluene             | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Dibromochloromethane        | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromo-3-chloropropane | ND | --- | 100  | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dibromoethane (EDB)     | ND | --- | 10.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| Dibromomethane              | ND | --- | 20.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |
| 1,2-Dichlorobenzene         | ND | --- | 10.0 | ug/L | 20 | --- | ND | --- | --- | --- | 30% |

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## ANALYTICAL REPORT

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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                   | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C                 |        |                 |                          |       |                          |              | Water         |       |              |     |           |       |
| Duplicate (23L0632-DUP1)                  |        |                 | Prepared: 12/16/23 10:04 |       | Analyzed: 12/16/23 19:34 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1036-13RE1) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 1,3-Dichlorobenzene                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,4-Dichlorobenzene                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Dichlorodifluoromethane                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethane                        | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2-Dichloroethane (EDC)                  | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloroethene                        | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | 5.60          | ---   | ---          | *** | 30%       |       |
| cis-1,2-Dichloroethene                    | 1770   | ---             | 8.00                     | ug/L  | 20                       | ---          | 1690          | ---   | ---          | 4   | 30%       |       |
| trans-1,2-Dichloroethene                  | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | 6.60          | ---   | ---          | *** | 30%       |       |
| 1,2-Dichloropropane                       | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3-Dichloropropane                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2,2-Dichloropropane                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1-Dichloropropene                       | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| cis-1,3-Dichloropropene                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| trans-1,3-Dichloropropene                 | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Ethylbenzene                              | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Hexachlorobutadiene                       | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 2-Hexanone                                | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Isopropylbenzene                          | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Isopropyltoluene                        | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methylene chloride                        | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 4-Methyl-2-pentanone (MiBK)               | ND     | ---             | 200                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Methyl tert-butyl ether (MTBE)            | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Naphthalene                               | ND     | ---             | 100                      | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| n-Propylbenzene                           | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Styrene                                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1,2-Tetrachloroethane                 | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2,2-Tetrachloroethane                 | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Tetrachloroethene (PCE)                   | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Toluene                                   | ND     | ---             | 20.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichlorobenzene                    | ND     | ---             | 40.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trichlorobenzene                    | ND     | ---             | 40.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,1-Trichloroethane                     | ND     | ---             | 8.00                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,1,2-Trichloroethane                     | ND     | ---             | 10.0                     | ug/L  | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |

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WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                   | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C                 |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Duplicate (23L0632-DUP1)                  |        |                 | Prepared: 12/16/23 10:04 |                  | Analyzed: 12/16/23 19:34 |              |               |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1036-13RE1) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| Trichloroethene (TCE)                     | 9.40   | ---             | 8.00                     | ug/L             | 20                       | ---          | 8.80          | ---   | ---          | 7   | 30%       |       |
| Trichlorofluoromethane                    | ND     | ---             | 40.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,3-Trichloropropane                    | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,2,4-Trimethylbenzene                    | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| 1,3,5-Trimethylbenzene                    | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Vinyl chloride                            | 2320   | ---             | 4.00                     | ug/L             | 20                       | ---          | 2230          | ---   | ---          | 4   | 30%       |       |
| m,p-Xylene                                | ND     | ---             | 20.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| o-Xylene                                  | ND     | ---             | 10.0                     | ug/L             | 20                       | ---          | ND            | ---   | ---          | --- | 30%       |       |
| Surr: 1,4-Difluorobenzene (Surr)          |        | Recovery: 102 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                         |        | 100 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)               |        | 100 %           |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

| Matrix Spike (23L0632-MS1)             |      |     |       |      | Prepared: 12/16/23 10:04    Analyzed: 12/16/23 15:27 |      |    |     |         | CONT |     |
|----------------------------------------|------|-----|-------|------|------------------------------------------------------|------|----|-----|---------|------|-----|
| QC Source Sample: Non-SDG (A3L1198-02) |      |     |       |      |                                                      |      |    |     |         |      |     |
| EPA 8260D                              |      |     |       |      |                                                      |      |    |     |         |      |     |
| Acetone                                | 46.2 | --- | 20.0  | ug/L | 1                                                    | 40.0 | ND | 116 | 39-160% | ---  | --- |
| Acrylonitrile                          | 19.3 | --- | 2.00  | ug/L | 1                                                    | 20.0 | ND | 96  | 63-135% | ---  | --- |
| Benzene                                | 20.8 | --- | 0.200 | ug/L | 1                                                    | 20.0 | ND | 104 | 79-120% | ---  | --- |
| Bromobenzene                           | 20.3 | --- | 0.500 | ug/L | 1                                                    | 20.0 | ND | 102 | 80-120% | ---  | --- |
| Bromochloromethane                     | 20.5 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 102 | 78-123% | ---  | --- |
| Bromodichloromethane                   | 21.4 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 107 | 79-125% | ---  | --- |
| Bromoform                              | 23.6 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 118 | 66-130% | ---  | --- |
| Bromomethane                           | 18.1 | --- | 5.00  | ug/L | 1                                                    | 20.0 | ND | 91  | 53-141% | ---  | --- |
| 2-Butanone (MEK)                       | 39.9 | --- | 10.0  | ug/L | 1                                                    | 40.0 | ND | 100 | 56-143% | ---  | --- |
| n-Butylbenzene                         | 23.2 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 116 | 75-128% | ---  | --- |
| sec-Butylbenzene                       | 24.0 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 120 | 77-126% | ---  | --- |
| tert-Butylbenzene                      | 22.0 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 110 | 78-124% | ---  | --- |
| Carbon disulfide                       | 21.8 | --- | 10.0  | ug/L | 1                                                    | 20.0 | ND | 109 | 64-133% | ---  | --- |
| Carbon tetrachloride                   | 25.0 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 125 | 72-136% | ---  | --- |
| Chlorobenzene                          | 21.3 | --- | 0.500 | ug/L | 1                                                    | 20.0 | ND | 106 | 80-120% | ---  | --- |
| Chloroethane                           | 22.5 | --- | 5.00  | ug/L | 1                                                    | 20.0 | ND | 113 | 60-138% | ---  | --- |
| Chloroform                             | 22.3 | --- | 1.00  | ug/L | 1                                                    | 20.0 | ND | 111 | 79-124% | ---  | --- |
| Chloromethane                          | 19.1 | --- | 5.00  | ug/L | 1                                                    | 20.0 | ND | 95  | 50-139% | ---  | --- |

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Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|-------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C              |        |                 |                          |       |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23L0632-MS1)             |        |                 | Prepared: 12/16/23 10:04 |       | Analyzed: 12/16/23 15:27 |              | CONT          |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1198-02) |        |                 |                          |       |                          |              |               |       |              |     |           |       |
| 2-Chlorotoluene                        | 20.8   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 104   | 79-122%      | --- | ---       |       |
| 4-Chlorotoluene                        | 21.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 109   | 78-122%      | --- | ---       |       |
| Dibromochloromethane                   | 21.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 108   | 74-126%      | --- | ---       |       |
| 1,2-Dibromo-3-chloropropane            | 18.9   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 95    | 62-128%      | --- | ---       |       |
| 1,2-Dibromoethane (EDB)                | 21.1   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 106   | 77-121%      | --- | ---       |       |
| Dibromomethane                         | 21.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 108   | 79-123%      | --- | ---       |       |
| 1,2-Dichlorobenzene                    | 21.0   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 105   | 80-120%      | --- | ---       |       |
| 1,3-Dichlorobenzene                    | 21.7   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 109   | 80-120%      | --- | ---       |       |
| 1,4-Dichlorobenzene                    | 20.3   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 102   | 79-120%      | --- | ---       |       |
| Dichlorodifluoromethane                | 24.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 120   | 32-152%      | --- | ---       |       |
| 1,1-Dichloroethane                     | 21.1   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 105   | 77-125%      | --- | ---       |       |
| 1,2-Dichloroethane (EDC)               | 21.7   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 108   | 73-128%      | --- | ---       |       |
| 1,1-Dichloroethene                     | 24.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 122   | 71-131%      | --- | ---       |       |
| cis-1,2-Dichloroethene                 | 19.5   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 98    | 78-123%      | --- | ---       |       |
| trans-1,2-Dichloroethene               | 22.6   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 113   | 75-124%      | --- | ---       |       |
| 1,2-Dichloropropane                    | 19.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 96    | 78-122%      | --- | ---       |       |
| 1,3-Dichloropropane                    | 19.7   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 99    | 80-120%      | --- | ---       |       |
| 2,2-Dichloropropane                    | 22.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 111   | 60-139%      | --- | ---       |       |
| 1,1-Dichloropropene                    | 21.9   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 79-125%      | --- | ---       |       |
| cis-1,3-Dichloropropene                | 15.6   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 78    | 75-124%      | --- | ---       |       |
| trans-1,3-Dichloropropene              | 21.1   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 105   | 73-127%      | --- | ---       |       |
| Ethylbenzene                           | 22.5   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 112   | 79-121%      | --- | ---       |       |
| Hexachlorobutadiene                    | 21.3   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 107   | 66-134%      | --- | ---       |       |
| 2-Hexanone                             | 35.1   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 88    | 57-139%      | --- | ---       |       |
| Isopropylbenzene                       | 23.2   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 116   | 72-131%      | --- | ---       |       |
| 4-Isopropyltoluene                     | 22.0   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 110   | 77-127%      | --- | ---       |       |
| Methylene chloride                     | 21.6   | ---             | 10.0                     | ug/L  | 1                        | 20.0         | ND            | 108   | 74-124%      | --- | ---       |       |
| 4-Methyl-2-pentanone (MiBK)            | 37.8   | ---             | 10.0                     | ug/L  | 1                        | 40.0         | ND            | 95    | 67-130%      | --- | ---       |       |
| Methyl tert-butyl ether (MTBE)         | 20.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 102   | 71-124%      | --- | ---       |       |
| Naphthalene                            | 15.7   | ---             | 5.00                     | ug/L  | 1                        | 20.0         | ND            | 79    | 61-128%      | --- | ---       | Q-54b |
| n-Propylbenzene                        | 22.2   | ---             | 0.500                    | ug/L  | 1                        | 20.0         | ND            | 111   | 76-126%      | --- | ---       |       |
| Styrene                                | 20.3   | ---             | 1.00                     | ug/L  | 1                        | 20.0         | ND            | 101   | 78-123%      | --- | ---       |       |
| 1,1,1,2-Tetrachloroethane              | 21.2   | ---             | 0.400                    | ug/L  | 1                        | 20.0         | ND            | 106   | 78-124%      | --- | ---       |       |

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Philip Nerenberg, Lab Director

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## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

WSP USA Environment &amp; Infrastructure Inc.

15862 SW 72nd Ave. Suite 150

Portland, OR 97224

Project: OCS

Project Number: 361M1148

Project Manager: Russ Bunker

Report ID:

A3L1059 - 12 17 23 2304

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260D

| Analyte                                | Result | Detection Limit | Reporting Limit          | Units            | Dilution                 | Spike Amount | Source Result | % REC | % REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|--------------------------|------------------|--------------------------|--------------|---------------|-------|--------------|-----|-----------|-------|
| Batch 23L0632 - EPA 5030C              |        |                 |                          |                  |                          | Water        |               |       |              |     |           |       |
| Matrix Spike (23L0632-MS1)             |        |                 | Prepared: 12/16/23 10:04 |                  | Analyzed: 12/16/23 15:27 |              | CONT          |       |              |     |           |       |
| QC Source Sample: Non-SDG (A3L1198-02) |        |                 |                          |                  |                          |              |               |       |              |     |           |       |
| 1,1,2,2-Tetrachloroethane              | 21.2   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 106   | 71-121%      | --- | ---       | Q-54  |
| Tetrachloroethene (PCE)                | 23.1   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 115   | 74-129%      | --- | ---       |       |
| Toluene                                | 21.3   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 106   | 80-121%      | --- | ---       |       |
| 1,2,3-Trichlorobenzene                 | 20.4   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 102   | 69-129%      | --- | ---       |       |
| 1,2,4-Trichlorobenzene                 | 18.3   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 91    | 69-130%      | --- | ---       |       |
| 1,1,1-Trichloroethane                  | 23.2   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 116   | 74-131%      | --- | ---       |       |
| 1,1,2-Trichloroethane                  | 21.9   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 110   | 80-120%      | --- | ---       |       |
| Trichloroethene (TCE)                  | 20.5   | ---             | 0.400                    | ug/L             | 1                        | 20.0         | ND            | 103   | 79-123%      | --- | ---       |       |
| Trichlorofluoromethane                 | 28.5   | ---             | 2.00                     | ug/L             | 1                        | 20.0         | ND            | 143   | 65-141%      | --- | ---       |       |
| 1,2,3-Trichloropropane                 | 21.8   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 109   | 73-122%      | --- | ---       |       |
| 1,2,4-Trimethylbenzene                 | 23.2   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 116   | 76-124%      | --- | ---       |       |
| 1,3,5-Trimethylbenzene                 | 23.0   | ---             | 1.00                     | ug/L             | 1                        | 20.0         | ND            | 115   | 75-124%      | --- | ---       |       |
| Vinyl chloride                         | 20.4   | ---             | 0.200                    | ug/L             | 1                        | 20.0         | ND            | 102   | 58-137%      | --- | ---       |       |
| m,p-Xylene                             | 48.6   | ---             | 1.00                     | ug/L             | 1                        | 40.0         | ND            | 121   | 80-121%      | --- | ---       |       |
| o-Xylene                               | 20.6   | ---             | 0.500                    | ug/L             | 1                        | 20.0         | ND            | 103   | 78-122%      | --- | ---       |       |
| Surr: 1,4-Difluorobenzene (Surr)       |        | Recovery: 101 % |                          | Limits: 80-120 % |                          | Dilution: 1x |               |       |              |     |           |       |
| Toluene-d8 (Surr)                      |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |
| 4-Bromofluorobenzene (Surr)            |        | 94 %            |                          | 80-120 %         |                          | "            |               |       |              |     |           |       |

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**WSP USA Environment & Infrastructure Inc.**  
15862 SW 72nd Ave. Suite 150  
Portland, OR 97224

Project: **OCS**  
Project Number: **361M1148**  
Project Manager: **Russ Bunker**

**Report ID:**  
**A3L1059 - 12 17 23 2304**

**SAMPLE PREPARATION INFORMATION**

**Volatile Organic Compounds by EPA 8260D**

Prep: EPA 5030C

| Lab Number     | Matrix | Method    | Sampled        | Prepared       | Sample<br>Initial/Final | Default<br>Initial/Final | RL Prep<br>Factor |
|----------------|--------|-----------|----------------|----------------|-------------------------|--------------------------|-------------------|
| Batch: 23L0632 |        |           |                |                |                         |                          |                   |
| A3L1059-01RE1  | Water  | EPA 8260D | 12/07/23 12:55 | 12/16/23 11:48 | 5mL/5mL                 | 5mL/5mL                  | 1.00              |

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## QUALIFIER DEFINITIONS

### Client Sample and Quality Control (QC) Sample Qualifier Definitions:

#### Apex Laboratories

- CONT** The Sample Container provided for this analysis was not provided by Apex Laboratories, and has not been verified as part of the Apex Quality System.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +11%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -3%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260

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### REPORTING NOTES AND CONVENTIONS:

#### Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.  
ND Analyte NOT DETECTED at or above the detection or reporting limit.  
NR Result Not Reported  
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

#### Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).  
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

#### Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

#### Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.  
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")  
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

#### QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

#### Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" \*\*\* " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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### REPORTING NOTES AND CONVENTIONS (Cont.):

#### **Blanks:**

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

#### **Preparation Notes:**

##### **Mixed Matrix Samples:**

##### **Water Samples:**

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

##### **Soil and Sediment Samples:**

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

#### **Sampling and Preservation Notes:**

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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### LABORATORY ACCREDITATION INFORMATION

**ORELAP Certification ID: OR100062 (Primary Accreditation)** -  
**EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

#### **Apex Laboratories**

| Matrix                                                                                | Analysis | TNI_ID | Analyte | TNI_ID | Accreditation |
|---------------------------------------------------------------------------------------|----------|--------|---------|--------|---------------|
| <u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u> |          |        |         |        |               |

#### **Secondary Accreditations**

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

#### **Subcontract Laboratory Accreditations**

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.  
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

#### **Field Testing Parameters**

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Report ID:

A3L1059 - 12 17 23 2304

## APEX LABS COOLER RECEIPT FORM

Client: WSP Element WO#: A3 L1059

Project/Project #: OCS 361M1148

## Delivery Info:

Date/time received: 12/7/23 @ 14:03 By: ABW

Delivered by: Apex Client ☒ ESS FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐

Cooler Inspection Date/time inspected: 12/7/23 @ 14:03 By: ABW

Chain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

|                            | Cooler #1 | Cooler #2 | Cooler #3 | Cooler #4 | Cooler #5 | Cooler #6 | Cooler #7 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temperature (°C)           | 4.1       |           |           |           |           |           |           |
| Custody seals? (Y/N)       | N         |           |           |           |           |           |           |
| Received on ice? (Y/N)     | Y         |           |           |           |           |           |           |
| Temp. blanks? (Y/N)        | N         |           |           |           |           |           |           |
| Ice type: (Gel/Real/Other) | Real      |           |           |           |           |           |           |
| Condition (In/Out):        | In        |           |           |           |           |           |           |

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐

Sample Inspection: Date/time inspected: 12/8/23 @ 1525 By: JS

All samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☐ Comments:COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☐ No ☒ NA ☒ JS 12/8/23

Comments:

Water samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☐ NA ☒ pH ID:

Comments:

Additional information:

Labeled by: JS

Witness: OJS

Cooler Inspected by: JS

Form Y-003 R-01

Apex Laboratories

Philip Nerenberg

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