



**VIA ELECTRONIC MAIL**

September 26, 2022

John Hopkins  
Remedial Project Manager  
U.S. Environmental Protection Agency, Region III  
1650 Arch Street  
Mail Code – 3LD10  
Philadelphia, PA 19103-2029

**Subject: Quarterly Progress Report No. 23  
Former Kop-Flex Facility Site, Hanover, Maryland  
USEPA ID No. MDD043373935  
Administrative Order on Consent, Docket No. RCRA-03-2016-0170 CA**

Dear John:

On behalf of EMERSUB 16, LLC, a subsidiary of Emerson Electric Co., WSP USA, Inc. (WSP) is submitting this quarterly progress report describing the activities conducted in the second quarter of calendar year 2022 (April 1<sup>st</sup> through June 30<sup>th</sup>) as part of the corrective measures implementation at the former Kop-Flex, Inc. facility property located at 7555 Harmans Road (Site) in Hanover, Maryland. The Site is identical to the area described as the “Facility” in the Administrative Order on Consent, Docket No. RCRA-03-2016-0170 CA (Consent Order). The report also describes the activities planned for the third quarter of calendar year 2022 (July 1<sup>st</sup> through September 30<sup>th</sup>).

This progress report is being submitted to the U.S. Environmental Protection Agency (EPA) pursuant to Section VI.C.3 of the Consent Order. Please note that, in addition to performing the work conducted under the Consent Order, EMERSUB 16 continues to perform the remedial activities specified in the October 2015 Response Action Plan (RAP) approved by the Maryland Department of the Environment (MDE) Voluntary Cleanup Program, and that EMERSUB 16 copies USEPA on all submittals required under that program.

If you have any questions, please do not hesitate to contact us at 703-709-6500.

Kind regards,

Robert E. Johnson  
Senior Technical Manager – Earth & Environment

ELM:SLB:REJ  
K:\Emerson\Kop-Flex\\_Reports\\_Progress Reports\EPA Progress Reports\CM Progress Report 23 Q2 2022\  
Encl.

cc: Mr. Stephen Clarke, EMERSUB 16 LLC  
Ms. Richelle Hanson, Maryland Department of the Environment

WSP USA  
Suite 300  
13530 Dulles Technology Drive  
Herndon, VA 20171

Tel.: +1 703 709-6500  
Fax: +1 703 709-8505  
wsp.com



## CERTIFICATION

I certify that the information contained in or accompanying this quarterly progress report is true, accurate, and complete.

As to those portions of this quarterly progress report for which I cannot personally verify their accuracy, I certify under penalty of law that this quarterly report and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature:

A handwritten signature in blue ink, appearing to read 'Stephen L. Clarke', written over a horizontal line.

Name:

Stephen L. Clarke

Title:

President of EMERSUB 16, LLC

WSP USA  
Suite 300  
13530 Dulles Technology Drive  
Herndon, VA 20171

Tel.: +1 703 709-8500  
Fax: +1 703 709-8505  
wsp.com



## Quarterly Progress Report No. 23

Former Kop-Flex Facility Site

April 2022 through June 2022

**Site Name:** Former Kop-Flex Facility  
**Site Address:** 7555 Harmans Road  
Hanover, Maryland 21077

**Consultant:** WSP USA Inc.  
**Address:** 13530 Dulles Technology Drive, Suite 300  
Herndon, Virginia 20171  
**Phone No.:** (703) 709-6500

**Project Coordinator:** Eric Johnson  
**Alternate:** Lisa Kelly

## 1.0 ACTIVITIES COMPLETED DURING APRIL 2022 – JUNE 2022 REPORTING PERIOD

### 1.1 HYDRAULIC CONTAINMENT SYSTEM OPERATION

- The hydraulic containment system (System) operated for 28 of the 91 days during the second quarter of 2022, which equates to a 31% run-time efficiency over this 3-month period. The effluent samples were collected for chemical analysis in accordance with National Pollutant Discharge Elimination System (NPDES) Permit MD 0069094, which corresponds to Maryland State Discharge Permit Number 15-DP-3442, issued by the MDE (Discharge Permit). The System was manually shut down on April 29 based on the results of the boiler blowdown discharge pH study conducted from late March through early April at the request of the Anne Arundel County (County) Pre-treatment Program. The pH of the blowdown water during the study consistently exceeded the upper limit of 10 standard units (SU) specified in the Wastewater Discharge Permit issued by the County Pre-treatment Program, with an average measured pH of 10.81 SU. The elevated pH of the boiler blowdown water is mainly due to the high pH (10.5 SU) of the water treatment chemical used to maintain boiler water chemistry parameters within recommended operating ranges. pH values of approximately 8-9 SU for the municipal water, which serves as the feed water for the boiler, may also be a contributing factor to the elevated pH of the blowdown.

Based on the results of the blowdown discharge study, the County Pre-treatment Program denied EMERSUB 16's and WSP's request for a variance from the upper pH limit specified in the Wastewater Discharge Permit and indicated that measures would need to be implemented to neutralize the blowdown water prior to discharge to the sanitary sewer. Given that operation of the boiler is necessary for the frequent onsite regeneration of the treatment resin, the System remained shut down until implementation of an alternate method for managing the boiler blowdown. Operation of the System resumed in mid-August 2022 following interim modifications to the System that enable the boiler blowdown to be routed to an onsite frac tank, where the pH will be adjusted prior to discharge to the sanitary sewer system in accordance with the Wastewater Discharge Permit. (Additional information regarding the monitoring of discharge to the sanitary sewer system is provided in Section 1.2 below.)

- Regarding a long-term solution, Addendum #2 for the State Discharge/NPDES permit renewal application was submitted to MDE on August 5, 2022, for the planned addition of the boiler blowdown water to the extracted groundwater flow and routing of the combined water through the treatment System and discharge to Stony Run. The addition of the blowdown water to the process water flow will serve as the long-term approach for managing the boiler blowdown.
- The System was briefly operated on June 26<sup>th</sup> to collect samples of the recovery well discharge as part of the semiannual groundwater monitoring event. It was briefly operated again on June 28<sup>th</sup> and June 29<sup>th</sup> to conduct yield testing of each of



the System recovery wells as part of an assessment of the recovery well performance. Additional information regarding the recovery well assessment and semiannual groundwater monitoring activities are provided in Sections 1.3 and 1.4, respectively.

A total of approximately 2.60 million gallons of impacted groundwater were extracted by the recovery wells and treated by the System during the second quarter of 2022, with the combined average monthly withdrawal rate during full-scale operation ranging from 66 gallons per minute (GPM) to 69 GPM. To monitor and evaluate concentrations of volatile organic compounds (VOCs) and 1,4-dioxane in the untreated and treated water, samples of both the System influent and effluent were collected and analyzed during the reporting period. An influent water sample was collected for chemical analysis in June, while effluent samples were collected in April and June. No effluent sample was collected in May as the System did not operate and discharge treated water to Outfall 001 during the month.

The total concentration of chlorinated VOCs (CVOCs) and 1,4-dioxane in the influent sample was 279 micrograms per liter ( $\mu\text{g/L}$ ), which is lower than historical sample results. As of the end of June 2022, an estimated total of 430 pounds of CVOCs and 180 pounds of 1,4-dioxane have been recovered from the affected portion of the Lower Patapsco aquifer. Analyses of the effluent samples indicated non-detect concentrations of CVOCs and non-detect to very low ( $1.0 \mu\text{g/L}$ ) concentrations of 1,4-dioxane. The analytical results for all monitoring parameters were in compliance with the effluent limitations specified in the Discharge Permit.

## **1.2 WASTEWATER DISCHARGE MONITORING TO PUBLICLY OWNED TREATMENT WORKS**

- The System includes a small boiler, which is used to generate steam for the onsite regeneration of the treatment resin. Boiler blowdown is primarily generated during the regeneration of the treatment resin, which occurs on Monday, Wednesday, and Friday of each week during normal System operation. As mentioned in the previous progress report, WSP initiated a small-scale pH study of the boiler blowdown water as requested by the County Pre-treatment Program on March 21<sup>st</sup>. Completion of the pH study was requested following a measured pH exceedance (10.76 SU) for the Wastewater Discharge Permit on November 3, 2021. The data obtained on the blowdown water would also be used to support EMERSUB 16's and WSP's request for a variance in the specified upper pH limit in the discharge permit. The study involved conducting field pH measurements of both the surface and bottom blowdown water using a calibrated field instrument during each regeneration event. In addition, information was gathered to determine the volume of blowdown discharge associated with each regeneration event. The data collection activities for the pH study were completed on April 8<sup>th</sup>.
- As mentioned above, the upper pH limit specified in the Wastewater Discharge Permit is 10 SU. The pH of the blowdown water from the boiler during the study ranged from 10.41 SU to 11.11 SU, with an average pH of 10.81 SU. A letter report with the results of the boiler blowdown pH study was submitted to the County Pre-treatment Program on May 27, 2022; a copy of this report is provided in Enclosure A. Based on the study results, the County Pre-treatment Program denied EMERSUB 16's request for a variance to the upper pH limit in the Wastewater Discharge Permit. As discussed above, WSP temporarily shut down the operation of the System until implementation of an alternate method for managing the boiler blowdown. Operation of the System resumed in mid-August 2022 following modification of the System that enable the blowdown water to be routed to an onsite frac tank, where the pH can be adjusted prior to discharge to the sanitary sewer system. The permanent solution for managing the boiler blowdown will be to add this water to the extracted groundwater and route the combined flow through the treatment system.

## **1.3 RECOVERY WELL ASSESSMENT AND REHABILITATION**

- As mentioned in the previous progress report, the submersible pump for recovery well RW-1S was replaced during April 2022. The observed condition of the replaced pump suggested the likely occurrence of iron fouling within this recovery well, which can occur during the normal operation of wells used for groundwater abstraction. Based on this observation,



WSP developed a plan to assess all groundwater recovery wells for possible iron fouling or other impacts that could affect recovery well performance.

- WSP retained Parratt-Wolff, Inc. to assist with the recovery well assessment and rehabilitation. Yield testing of each of the System recovery wells was conducted on June 28<sup>th</sup> and June 29<sup>th</sup> to assess recovery well performance. Compared to their initial (2016) condition, the testing suggested a significant reduction in yield, or specific capacity, of each of the shallow recovery wells. There was no reduction in performance of the deep recovery wells.

After completing the yield testing activities, a down-well camera survey was conducted at each recovery well. Real-time camera output for the shallow recovery wells indicated the existence of significant iron-containing biological build-up on the well screens and iron-containing solids at the bottom of each well. Fouling of the deep recovery wells was much less significant, with some minor build-up on the screens. The camera surveys also revealed the presence of degraded remnants of galvanized steel cable in some of the wells. Galvanized steel cable was used to secure the submersible pump placed down each recovery well during the System installation activities in early 2017. It was recently discovered during replacement of the submersible pump at RW-1S that the galvanized steel security cable is undergoing chemical degradation inside the well casing.

- Chemical rehabilitation of the shallow recovery wells to address the biological fouling impacts and redevelopment of all recovery wells was to be completed during early July 2022. Information regarding the recovery well rehabilitation activities, including the removal of the degraded galvanized steel cable, will be provided in the 3<sup>rd</sup> quarter 2022 progress report.

## 1.4 GROUNDWATER LEVEL MONITORING

- Groundwater level monitoring is conducted semi-annually to gather data to evaluate the hydraulic head conditions in both the shallow and deep zones of the Lower Patapsco aquifer at the Site. Based on historical water level data collected under non-remedial pumping conditions, groundwater in the shallow zone of the Lower Patapsco aquifer flows to the north and west toward Stony Run, while flow paths are to the south-southeast in the deep (confined) zone of the aquifer.

During the reporting period, water level measurements were collected from monitoring wells and recovery well piezometers early the week of June 26, 2022, as part of the semi-annual groundwater monitoring event at the Site. The water level data for this and previous measurement rounds is provided in Table 1. Water levels collected during the June 2022 measurement event are representative of non-remedial pumping conditions at the Site.

- Contour maps depicting the water table and hydraulic head in the lower portion of the shallow zone of the Lower Patapsco aquifer are provided in Figures 1 and 2, respectively. Evaluation of the groundwater elevations and gradients in the shallow zone are discussed separately below. Overall, the groundwater elevations in June 2022 were higher compared to levels under remedial pumping conditions due to the lack of groundwater withdrawals from the aquifer.
- The water table contour map (Figure 1) indicates the west-northwest flow of groundwater in the uppermost portion of the shallow zone of the Lower Patapsco aquifer across the Site. In the eastern portion of the Site, a slight mounding, or rise, in the water table continues to exist in the vicinity of wells MW-04 and MW-09. The water table mounding reflects enhanced recharge to the groundwater system associated with the routing of surface water runoff to the small storm water management area (SWMA) located in the east-central portion of the Site. The enhanced infiltration of runoff in this SWMA, compared to the surrounding paved area, causes the localized increase in the water table elevation in the immediate area.

The cessation of remedial pumping resulted in the disappearance of the pronounced head changes, or cone of depression, within the permeable sand deposits comprising the lower portion of the shallow zone in the eastern portion of the Site (Figure 2). Based on the head contours, groundwater flows in a generally northwestward direction toward Stony Run.



However, a slightly higher water level elevation at well MW-16 suggests the movement of groundwater in a more northerly direction in the southeast portion of the Site. This flow direction may reflect a transient condition within the shallow zone of the aquifer associated with recent construction activities in this area of the Site. The northward flow of groundwater in the shallow zone differs from the southerly direction of groundwater movement in the deep confined zone.

- Figure 3 depicts the potentiometric surface for the deep, confined zone of the Lower Patapsco aquifer based on the June 2022 water level measurements at the onsite deep wells and offsite wells MW-24D on the William-Scotsman property to the south and MW-46D on the Verizon property to the north. As with the shallow zone, the June 2022 data reflect the recovery of the hydraulic heads to a non-pumping condition following shutdown of the System at the end of April. The hydraulic head contours generated from the data demonstrate south to south-southeast flow pathways for groundwater in this deep confined zone. The southward groundwater flow direction is consistent with other potentiometric surface contour maps developed from water level data collected under non-remedial pumping conditions.

## 1.5 GROUNDWATER QUALITY MONITORING

- In accordance with the Groundwater Monitoring Plan, groundwater quality samples were collected in late-June 2022 from the onsite monitoring wells identified for semi-annual sampling, excluding shallow zone well MW-42 and deep zone well MW-16D due to earlier construction activities in these areas by the facility operator – Catalent Cell & Gene Therapy. (These wells were eventually sampled in mid-July, and the results will be reported in the progress report for the 3<sup>rd</sup> Quarter 2022 period.) Even though the System had not been operational since the end of April, samples of the water extracted by the recovery wells were collected during this monitoring event by temporarily bringing the System back online for a very short time period. The samples collected from the monitoring wells are representative of the groundwater quality a short (approximately 2-month) time period after the cessation of remedial pumping in the aquifer system.
- Samples from the shallow and deep monitoring wells were collected using HydraSleeve™ passive samplers, which were deployed to the same depths as previous monitoring events. Groundwater samples were obtained by carefully removing the HydraSleeve™ sampler from the well and decanting a representative portion of the collected water into the laboratory-supplied containers. All water samples were submitted to the Australian Laboratory Services (ALS) Global laboratory in Middletown, Pennsylvania, and analyzed for VOCs using EPA SW-846 Test Method 8260D and 1,4-dioxane using modified EPA Test Method 8270E with selected ion monitoring.
- Analytical results for the site-related CVOCs and 1,4-dioxane are summarized in Table 2 for the monitoring well samples. A copy of the certified laboratory analytical report for the samples is included in Enclosure B. Historical (December 2016 to present) data for the monitoring well samples are provided in Table 3.

The CVOC and 1,4-dioxane concentrations in the groundwater samples from the shallow zone monitoring wells are similar to levels detected in the November 2021 samples, although concentrations of 1,4-dioxane tended to be lower in several of the June 2022 samples (Table 3). The only samples exhibiting noticeable increases in COC levels between the November 2021 and June 2022 monitoring events were from wells MW-04 and MW-20, which are both located in the eastern portion of the Site (Figure 4). The concentration increases were associated with the 1,1,1-trichloroethane degradation products 1,1-dichloroethane (1,1-DCA) and 1,1-dichloroethene (1,1-DCE). The changes in the concentrations of these CVOCs appear to reflect inherent seasonal fluctuations in the water quality in the eastern portion of the Site.

For the deep monitoring well samples, the CVOC and 1,4-dioxane concentrations for the June 2022 samples are generally similar to levels detected in the November 2021 samples (Table 3). As with the shallow wells, the concentrations of 1,4-dioxane in the June 2022 samples from several deep wells were slightly lower than the levels detected in November 2021. A few of the wells – MW-21D, MW-22D and MW-23D – showed slight increases in the



CVOC (1,1-DCA and 1,1-DCE) concentrations in the June 2022 samples. The concentration changes detected in these samples did result in 1,1-DCE being just above the Site Groundwater Cleanup Standard at the MW-22D location. The presence of COC levels that slightly exceed or are below the applicable cleanup levels at the MW-22D and MW-40D locations reflect transient fluctuations in constituent concentrations along the boundaries of the impacted groundwater zone and not an actual expansion in the width of the contaminant plumes in the deep confined zone of the Lower Patapsco aquifer with the cessation of groundwater pumping from the deep recovery wells in the southern part of the Site (Figure 5).

- Analytical results for the site-related CVOCs and 1,4-dioxane in the recovery well discharge samples are summarized in Table 4. The certified analytical results for these samples are included in the laboratory report provided in Enclosure B.

Overall, the CVOC concentrations in groundwater from the shallow zone recovery wells were slightly to significantly higher than the levels detected in the December 2021 samples, while the concentrations of 1,4-dioxane were similar to or lower than the previous sample results. Total concentrations of detectable CVOCs and 1,4-dioxane in the samples from recovery wells RW-1S and RW-2S were 925 µg/l and 1,958 µg/l, respectively (Figure 6; Table 4). As with the historical data, the total CVOC and 1,4-dioxane concentration in the RW-3S sample (22.6 µg/l) remained noticeably lower relative to the other shallow recovery wells, with 1,1-DCA being the only COC with a concentration above the Site Groundwater Cleanup Standards.

The COC concentrations in the deep recovery well samples are comparable to the previous (December 2021) data, with 1,1-DCA, 1,1-DCE, and 1,4-dioxane detected at concentrations above the Site Groundwater Cleanup Standards (Table 4). As with previous sampling rounds, the sample results indicate higher levels of chlorinated CVOCs – primarily 1,1-DCA and 1,1-DCE – in the discharge from well RW-1D (302 µg/l) in the southwestern portion of the Site compared to RW-2D (152 µg/l) located near the southeastern corner. The 1,4-dioxane concentrations are very similar in the discharge samples from both deep recovery wells (Table 4).

## 2.0 PLANNED ONSITE ACTIVITIES FOR THE THIRD QUARTER OF 2022

- Continue with the design and implementation of a temporary system for managing the boiler blowdown water. This will allow for the resumption of normal System operation.
- Conduct the required effluent monitoring and monthly reporting pursuant to the State Discharge/NPDES Permit.
- Complete the re-development of all groundwater recovery wells and conduct physical and as needed chemical rehabilitation on the shallow recovery wells to mitigate chemical and biological fouling impacts and improve the yield, or specific capacity, to their initial (2016) condition.
- Submit the Five-Year (2017 through 2021) Corrective Measures Assessment Report for the hydraulic containment system to EPA and MDE.

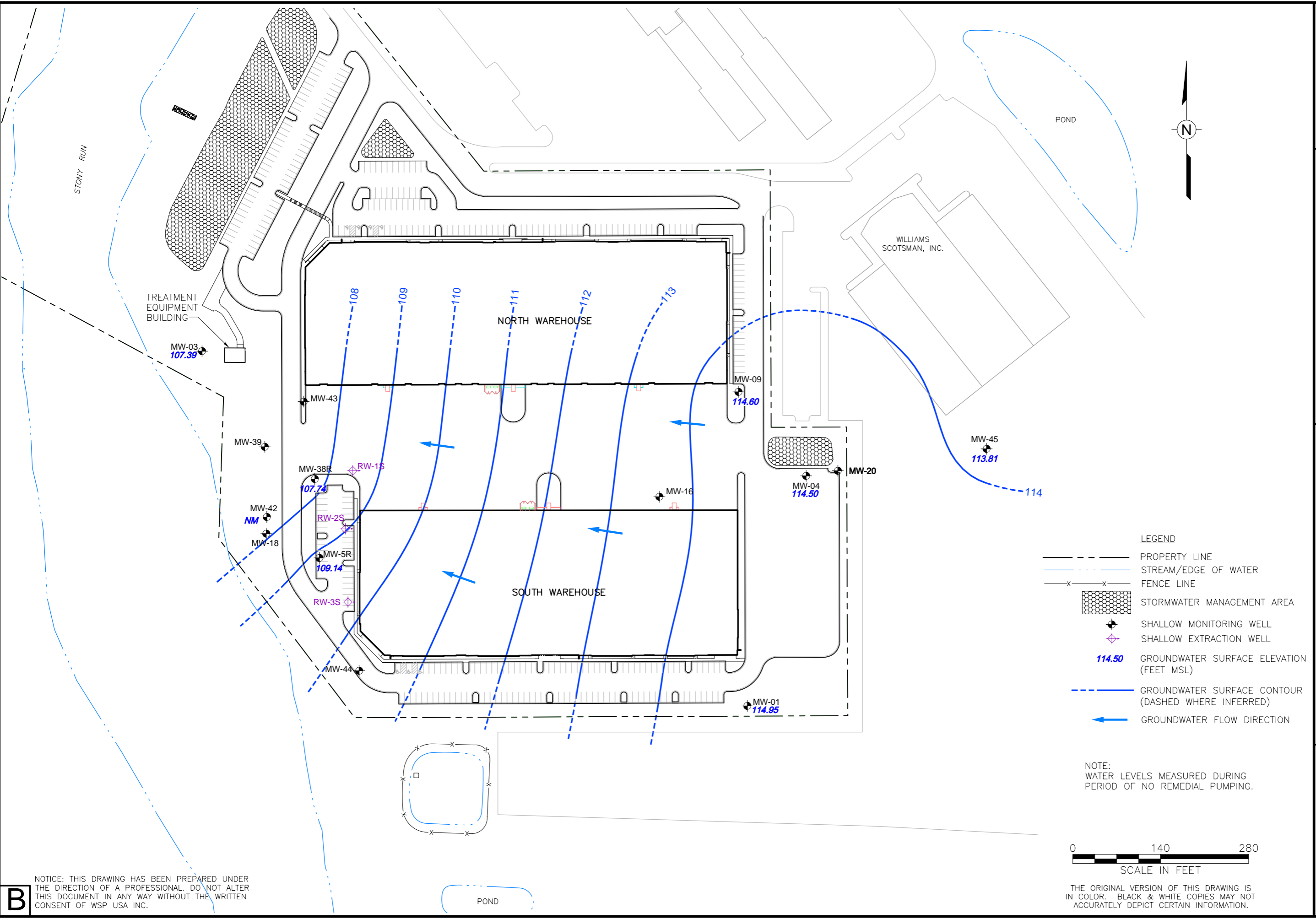
## 3.0 KEY PERSONNEL/FACILITY CHANGES

There were no changes to the key personnel for the corrective action or onsite conditions related to the activities conducted by the facility owner/operator.

## FIGURES



3:\ACAD\CADD\CLIENT\Emerson\MD\_Hanover\31401545.010\CAD\314V1545.010-102.dwg 8/9/2022 3:04 PM USEC01012



**B** NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

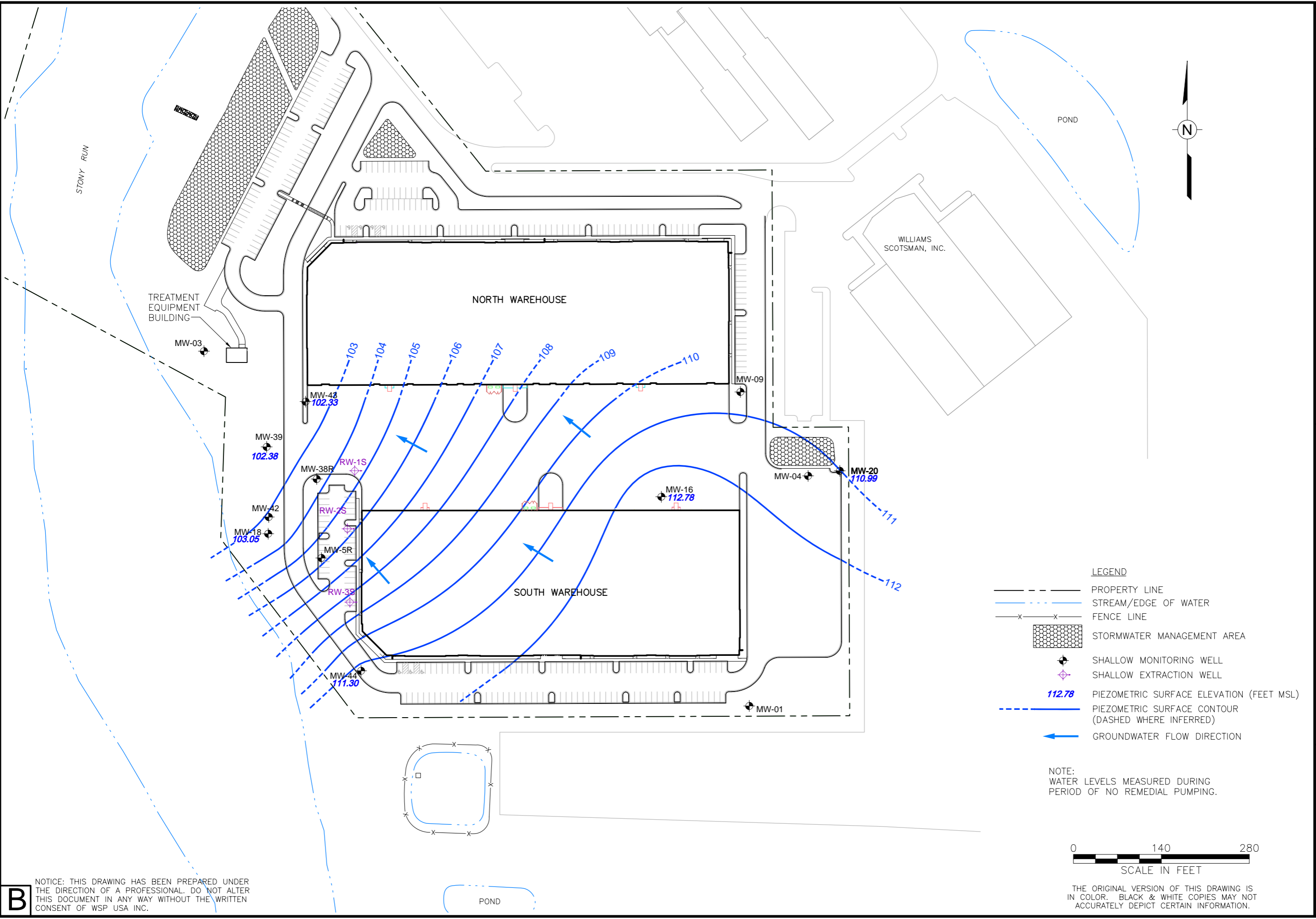
Drawn By: EGC  
 Checked:  
 Approved: *RKJ* 8/9/2022  
 DWG Name: 314V1545.010-102

FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSUB 16 LLC  
 ST. LOUIS, MISSOURI

FIGURE 1  
 WATER TABLE CONTOUR MAP  
 (JUNE 2022)

WSP USA, Inc.  
 13650 DULLES TECHNOLOGY DR  
 SUITE 300  
 HERNDON, VA 20171  
 TEL: +1 703.709.6500

R:\ACAD\CADD\CLIENT\Emerson\MD\_Hanover\31401545.01\CAD\314V1545.010-103.dwg 8/9/2022 3:05 PM USEC01012



LEGEND

- PROPERTY LINE
- STREAM/EDGE OF WATER
- x-x- FENCE LINE
- [Hatched Box] STORMWATER MANAGEMENT AREA
- ◆ SHALLOW MONITORING WELL
- ◆ SHALLOW EXTRACTION WELL
- 112.78 PIEZOMETRIC SURFACE ELEVATION (FEET MSL)
- - - - - PIEZOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- ← GROUNDWATER FLOW DIRECTION

NOTE: WATER LEVELS MEASURED DURING PERIOD OF NO REMEDIAL PUMPING.



THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

**B** NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

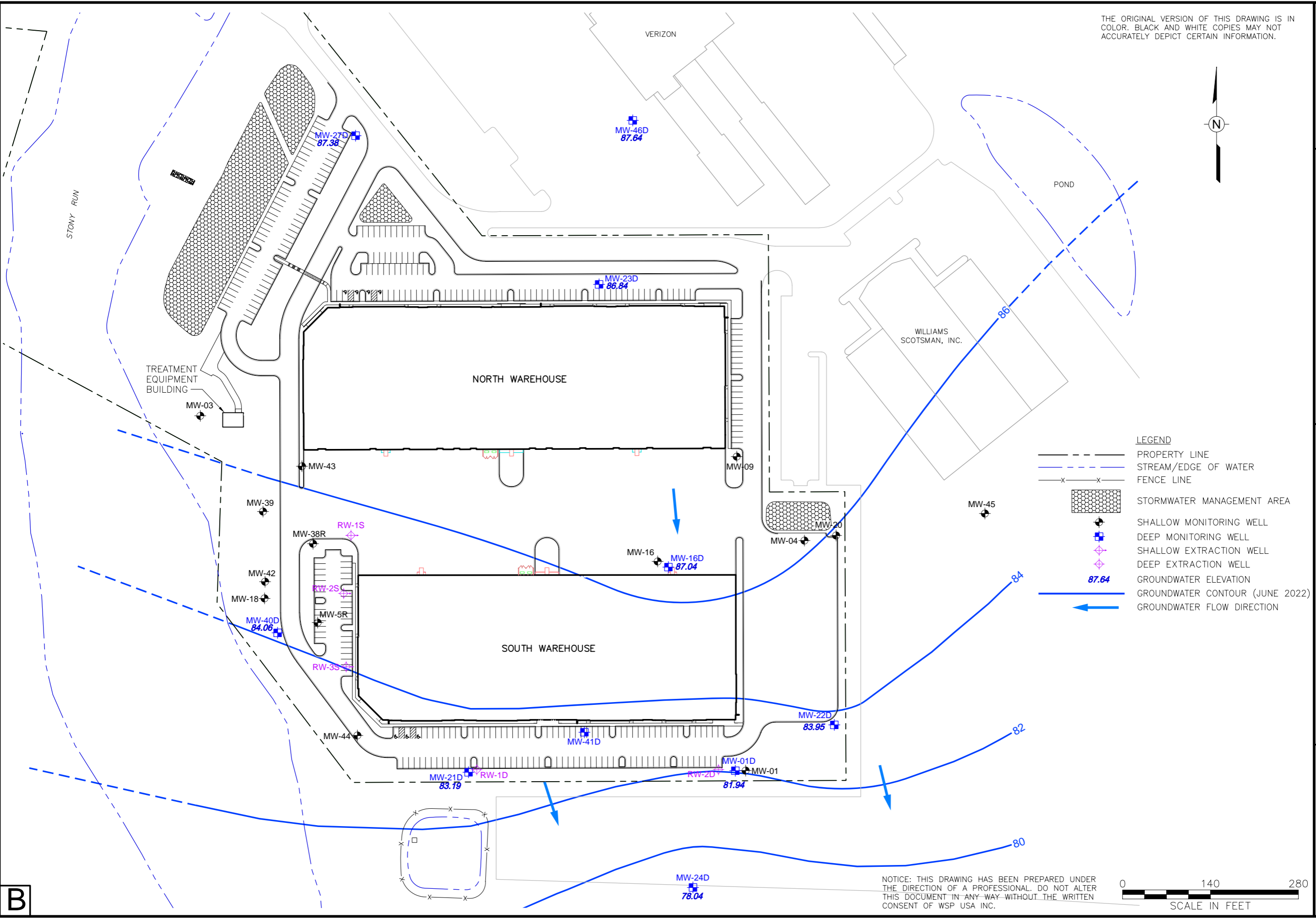
Drawn By: EGC  
 Checked:  
 Approved: *RLH* 8/9/2022  
 DWG Name: 314V1545.010-103

FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSUB 16 LLC  
 ST. LOUIS, MISSOURI

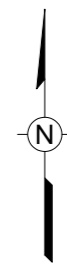
FIGURE 2  
 PIEZOMETRIC SURFACE CONTOUR MAP FOR THE LOWER PORTION OF THE SHALLOW ZONE OF THE LOWER PATASPCO AQUIFER (JUNE 2022)

WSP USA Inc.  
 13550 DULLES TECHNOLOGY DR  
 SUITE 300  
 HERNDON, VA 20171  
 TEL: +1 703.709.6500

R:\ACAD\CADD\Clients\Emerson\MD\_Hanover\31401545.010\CAD\314V1545.010-104.dwg 8/8/2022 1:06 PM USEC01012



THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.



Drawn By: EGC  
 Checked:  
 Approved: *RKJ* 8/9/2022  
 DWG Name: 314V1545.010-104

FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSUB 16 LLC  
 ST. LOUIS, MISSOURI

FIGURE 3  
 POTENTIOMETRIC SURFACE CONTOUR MAP DEEP  
 CONFINED ZONE OF THE LOWER PATAPSCO AQUIFER  
 JUNE 2022

WSP USA, Inc.  
 13550 LULLES TECHNOLOGY DR  
 SUITE 300  
 HERNDON, VA 20171  
 TEL: +1 703.709.6500

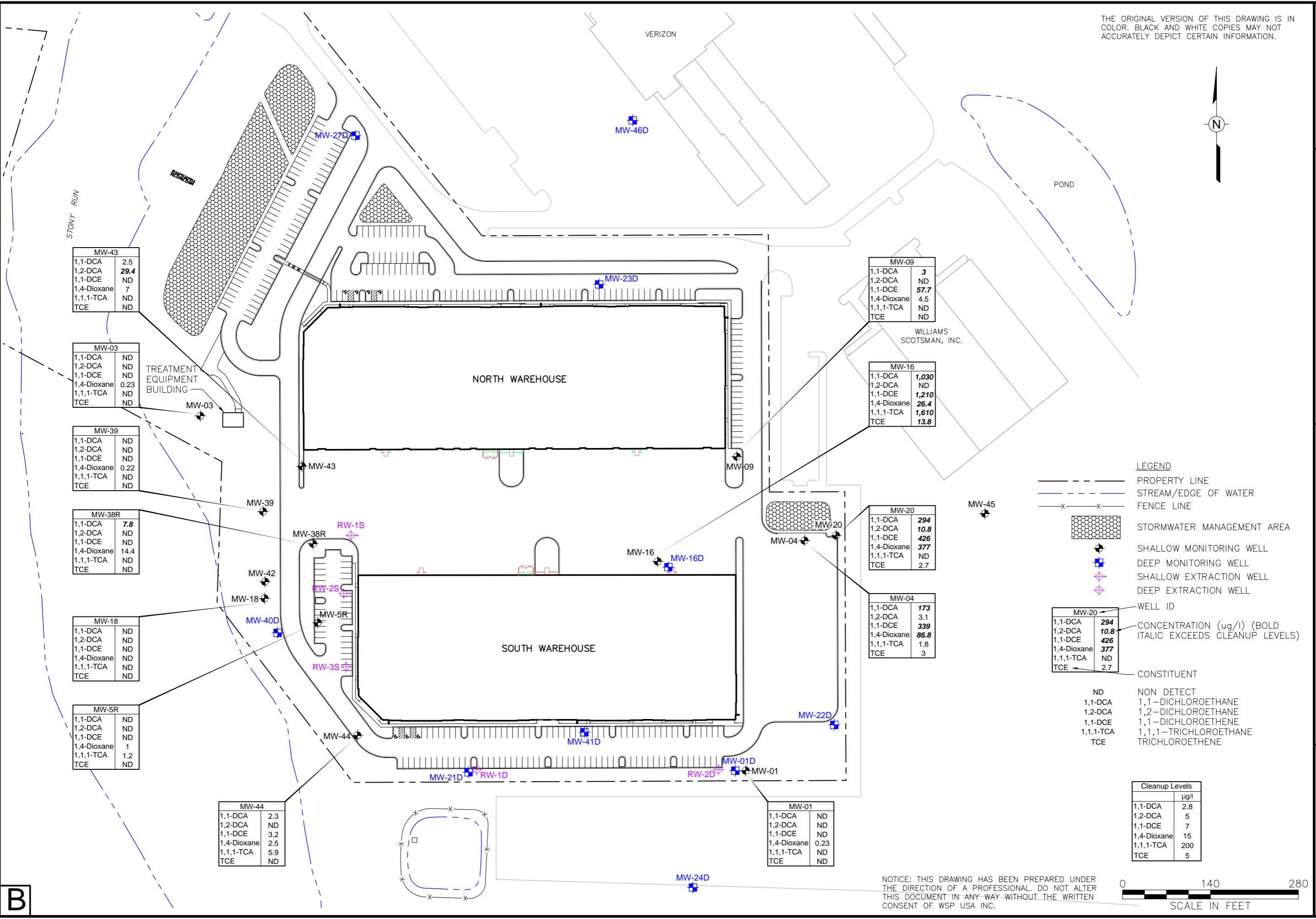


NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.



B

R:\ACAD\CADD\Clients\Emerson\MD\_Hanover\31401545.010\CAD\314V1545.010-104.dwg 8/8/2022 1:06 PM USECO1012



Drawn By: EGC  
 Checked:  
 Approved: *RKJ* 8/9/2022  
 DWG Name: 314V1545.010-104

FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSUB 16 LLC  
 ST. LOUIS, MISSOURI

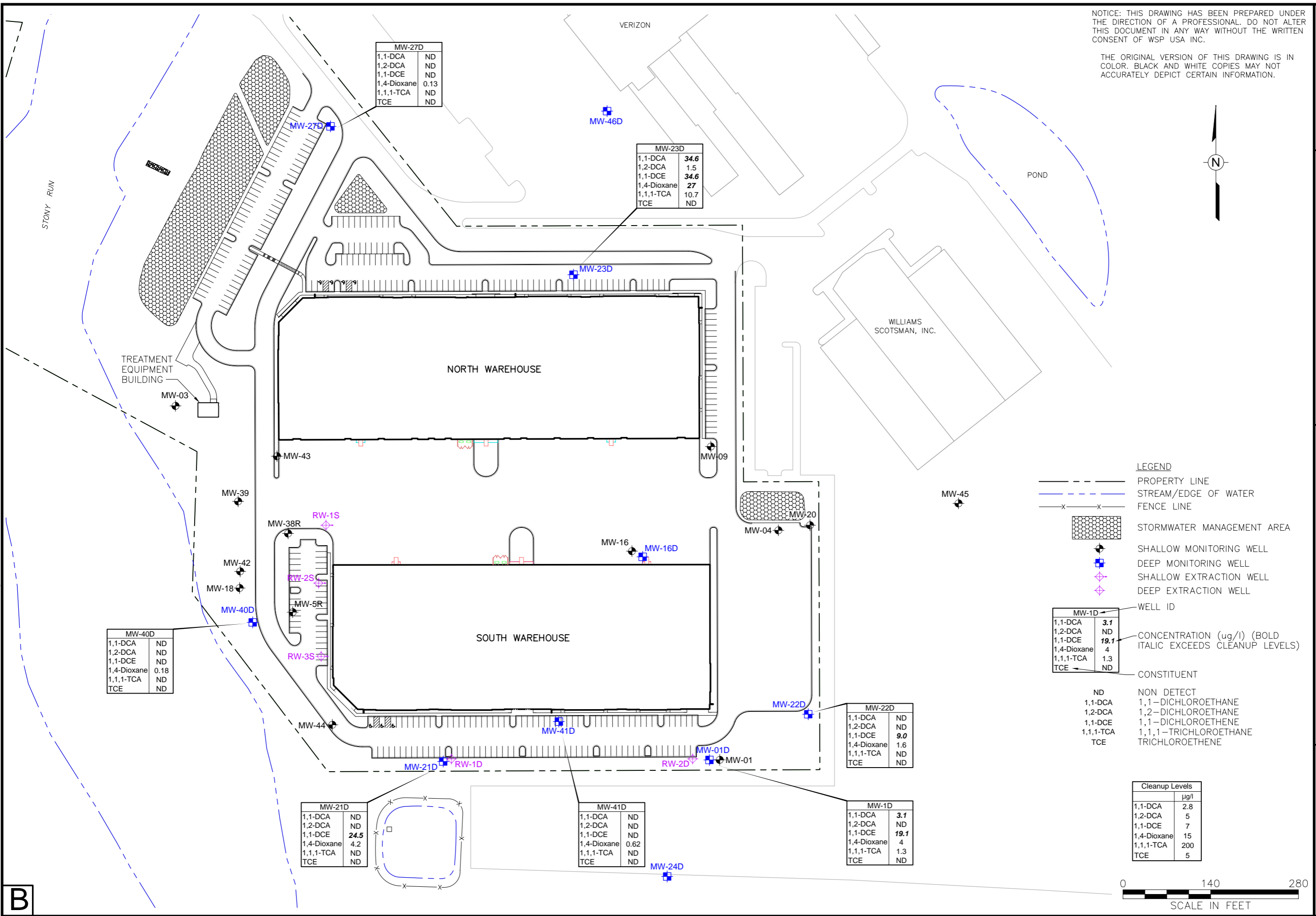
FIGURE 4  
 SAMPLING RESULTS FOR THE MONITORING WELLS  
 SCREENED IN THE SHALLOW ZONE OF THE  
 LOWER PATAPSCO AQUIFER (JUNE 2022)

WSP USA, Inc. TECHNOLOGY DR  
 13550 SULLY RD  
 SUITE 300  
 HERNDON, VA 20171  
 TEL: +1 703.709.6500

B

NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

R:\ACAD\CADD\Clients\Emerson\MD\_Hanover\31401545.01\CAD\314V1545.010-104.dwg 8/8/2022 1:06 PM USECO1012



NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

Drawn By: EGC  
 Checked:  
 Approved: *RJ* 8/8/2022  
 DWG Name: 314V1545.010-104

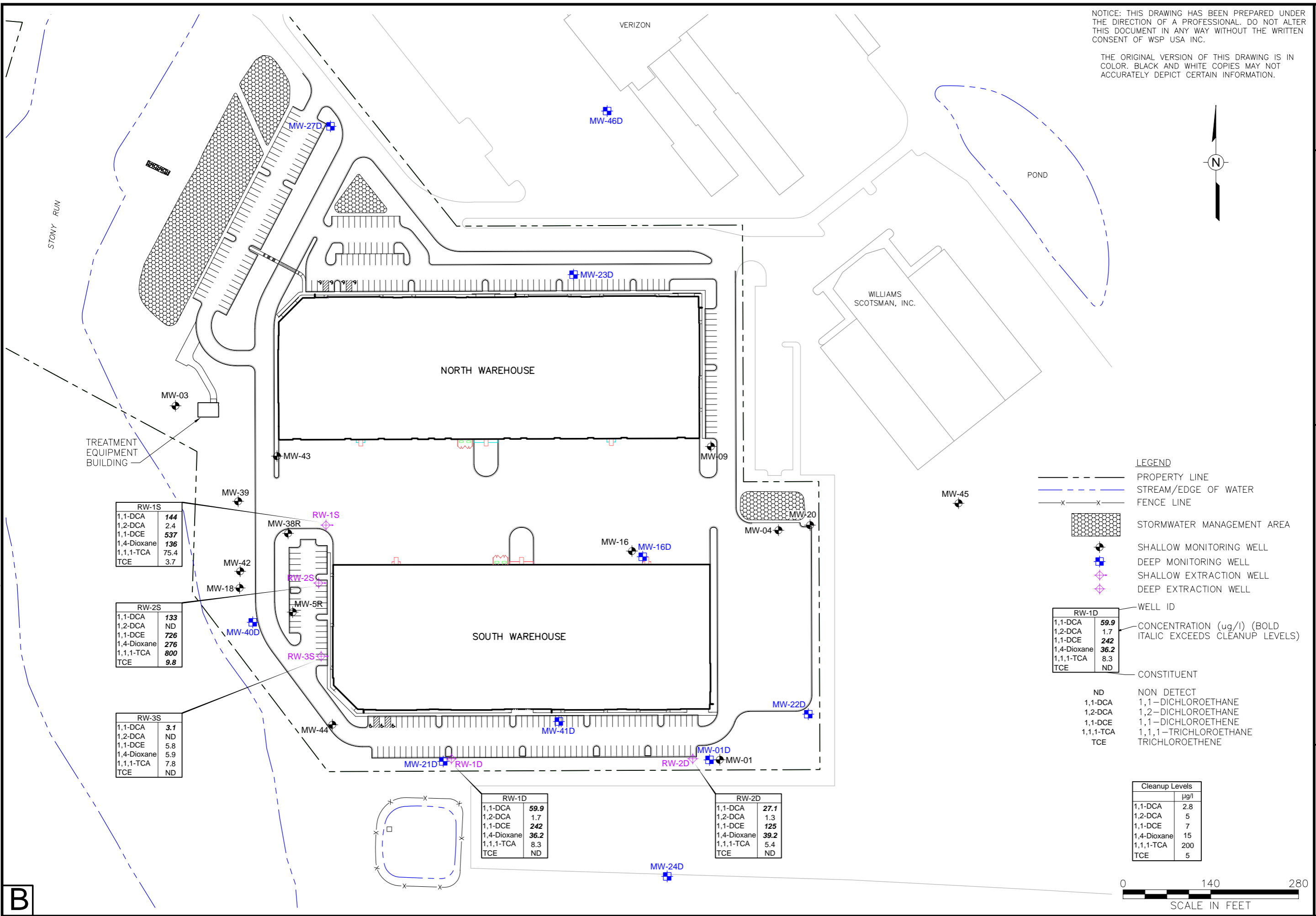
FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSUB 16 LLC  
 ST. LOUIS, MISSOURI

FIGURE 5  
 SAMPLING RESULTS FOR THE MONITORING WELLS  
 SCREENED IN THE DEEP ZONE OF THE  
 LOWER PATAPSCO AQUIFER (JUNE 2022)

WSP USA, Inc.  
 13550 SHILLES TECHNOLOGY DR  
 SUITE 300  
 HERRINGTON VA 20171  
 TEL: +1 703.709.6500

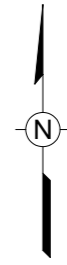
B

R:\ACAD\CADD\CLIENT\Emerson\MD\_Hanover\31401545.01\CAD\314V1545.010-105.dwg 8/8/2022 1:07 PM USEC01012



NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.



**LEGEND**

- PROPERTY LINE
- - - - - STREAM/EDGE OF WATER
- x-x-x-x- FENCE LINE
- [Hatched Box] STORMWATER MANAGEMENT AREA
- SHALLOW MONITORING WELL
- DEEP MONITORING WELL
- ◇ SHALLOW EXTRACTION WELL
- ◆ DEEP EXTRACTION WELL

**WELL ID**

1,1-DCA	<b>59.9</b>
1,2-DCA	1.7
1,1-DCE	<b>242</b>
1,4-Dioxane	<b>36.2</b>
1,1,1-TCA	8.3
TCE	ND

**CONCENTRATION (ug/l) (BOLD ITALIC EXCEEDS CLEANUP LEVELS)**

**CONSTITUENT**

- ND NON DETECT
- 1,1-DCA 1,1-DICHLOROETHANE
- 1,2-DCA 1,2-DICHLOROETHANE
- 1,1-DCE 1,1-DICHLOROETHENE
- 1,1,1-TCA 1,1,1-TRICHLOROETHANE
- TCE TRICHLOROETHENE

Cleanup Levels	
Constituent	µg/l
1,1-DCA	2.8
1,2-DCA	5
1,1-DCE	7
1,4-Dioxane	15
1,1,1-TCA	200
TCE	5



Drawn By: EGC  
 Checked:  
 Approved: *RKJ* 8/18/2022  
 DWG Name: 314V1545.010-105

FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSUB 16 LLC  
 ST. LOUIS, MISSOURI

**FIGURE 6**  
**GROUNDWATER RECOVERY WELL RESULTS**  
 (JUNE 2022)

**B**

## TABLES

Table 1

**Historical Water Level Measurements in  
Onsite Monitoring Wells and Recovery Well Piezometers  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 to June 2022) (a)**

Well ID	Zone	TOC elevation	12/7/2016 (b)		2/1/2017 (b)		3/21/2017		4/7/2017		4/10/2017		4/13/2017	
			Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-01	Shallow	129.8	NM	-	15.98	113.82	16.16	113.64	15.93	113.87	15.95	113.85	15.94	113.86
MW-03	Shallow	113.6	6.78	106.82	6.83	106.77	6.79	106.81	6.41	107.19	6.76	106.84	6.91	106.69
MW-04	Shallow	124.4	12.28	112.12	11.14	113.26	11.17	113.23	11.05	113.35	11.09	113.31	11.06	113.34
MW-5R	Shallow	123.5	15.87	107.63	13.49	110.01	15.98	107.52	16.15	107.35	16.38	107.12	16.45	107.05
MW-09	Shallow	125.1	10.84	114.26	11.30	113.80	11.51	113.59	11.41	113.69	11.41	113.69	11.51	113.59
MW-16	Shallow	124.0	10.92	113.08	11.12	112.88	11.66	112.34	11.74	112.26	11.81	112.19	11.82	112.18
MW-18	Shallow	125.1	20.77	104.33	20.84	104.26	22.85	102.25	22.85	102.25	23.11	101.99	23.18	101.92
MW-20	Shallow	125.4	NM	-	12.24	113.16	12.5	112.90	12.33	113.07	12.31	113.09	12.3	113.10
MW-38R	Shallow	125.4	15.58	109.82	15.76	109.64	19.64	105.76	19.6	105.80	20.81	104.59	19.81	105.59
MW-39	Shallow	124.6	NM	-	20.96	103.64	22.64	101.96	22.55	102.05	21.86	102.74	23	101.60
MW-42	Shallow	125.9	16.18	109.72	16.26	109.64	19.28	106.62	19.33	106.57	19.52	106.38	19.49	106.41
MW-43	Shallow	122.8	19.25	103.55	19.31	103.49	20.68	102.12	20.31	102.49	20.61	102.19	21.81	100.99
MW-44	Shallow	127.1	14.93	112.17	15.25	111.85	17.7	109.40	17.08	110.02	17.18	109.92	17.35	109.75
MW-45	Shallow	126.7	NM	-	NM	-	14.1	112.62	13.85	112.87	13.85	112.87	13.85	112.87
RW-1S	Shallow	122.9	12.96	109.94	13.17	109.73	12.96	109.94	20.36	102.54	20.6	102.30	20.56	102.34
RW-2S	Shallow	123.5	14.12	109.38	14.02	109.48	28.55	94.95	28.88	94.62	29.81	93.69	29	94.50
RW-3S	Shallow	125.4	14.29	111.11	14.24	111.16	20.34	105.06	23.49	101.91	23.59	101.81	23.69	101.71
MW-1D	Deep	129.4	42.81	86.59	42.22	87.18	56.15	73.25	56.06	73.34	56.22	73.18	56.44	72.96
MW-16D	Deep	124.1	34.91	89.19	34.72	89.38	37.55	86.55	37.6	86.50	38.02	86.08	38.1	86.00
MW-21D	Deep	126.3	37.8	88.50	37.59	88.71	47.12	79.18	47.26	79.04	47.57	78.73	47.61	78.69
MW-22D	Deep	128.9	40.78	88.07	40.49	88.36	43.28	85.57	43.3	85.55	43.59	85.26	43.76	85.09
MW-23D	Deep	125.2	35.14	90.06	34.74	90.46	36.33	88.87	36.29	88.91	36.72	88.48	36.81	88.39
MW-24D	Deep	129.1	46.3	82.80	45.73	83.37	47.44	81.66	47.71	81.39	48	81.10	48.16	80.94
MW-27D	Deep	117.2	29.66	87.54	26.78	90.42	27.73	89.47	27.68	89.52	28.18	89.02	28.3	88.90
MW-40D	Deep	124.1	35.14	88.96	34.94	89.16	37.19	86.91	37.51	86.59	37.98	86.12	37.98	86.12
MW-41D	Deep	127.1	41.98	85.12	41.44	85.66	44.00	83.10	44.06	83.04	44.48	82.62	44.56	82.54
MW-46D	Deep	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
RW-1D	Deep	126.9	38.53	88.37	38.19	88.71	58.69	68.21	59.02	67.88	59.06	67.84	59.02	67.88
RW-2D	Deep	127.4	42.31	85.09	41.62	85.78	68.82	58.58	68.51	58.89	68.39	59.01	68.78	58.62

a/ Vertical datum is NAVD-88

NM = not measured

TOC = top of casing

NA = not available because the well had not been installed

Light gray shading denotes wells screened in the shallow (unconfined) zone; blue shading denotes wells screened in the deep (confined) zone.

Continuous pumping of the groundwater recovery well system started on March 29, 2017.

Water levels from both shallow and deep recovery wells were measured in piezometers co-located with the wells.

b/ Water level measurements representative of non-pumping conditions in the aquifer system.



Table 1

**Historical Water Level Measurements in  
Onsite Monitoring Wells and Recovery Well Piezometers  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 to June 2022) (a)**

Well ID	Zone	TOC elevation	4/17/2017		5/1/2017		5/8/2017		8/31/2017		10/25/2017		11/14/2017	
			Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-01	Shallow	129.8	15.90	113.90	15.92	113.88	15.81	113.99	15.49	114.31	NA	NA	14.17	115.63
MW-03	Shallow	113.6	6.90	106.70	6.96	106.64	6.87	106.73	7.59	106.01	NA	NA	7.27	106.33
MW-04	Shallow	124.4	11.13	113.27	10.95	113.45	10.91	113.49	10.66	113.74	NA	NA	10.97	113.43
MW-5R	Shallow	123.5	16.47	107.03	16.60	106.90	16.60	106.90	16.90	106.60	NA	NA	16.78	106.72
MW-09	Shallow	125.1	11.48	113.62	11.41	113.69	11.34	113.76	11.09	114.01	NA	NA	NA	NA
MW-16	Shallow	124.0	12.08	111.92	11.99	112.01	11.81	112.19	11.90	112.10	NA	NA	12.00	112.00
MW-18	Shallow	125.1	23.19	101.91	23.30	101.80	23.28	101.82	24.63	100.47	NA	NA	24.41	100.69
MW-20	Shallow	125.4	13.38	112.02	13.01	112.39	12.24	113.16	12.39	113.01	NA	NA	11.98	113.42
MW-38R	Shallow	125.4	19.84	105.56	19.94	105.46	19.96	105.44	20.16	105.24	NA	NA	19.93	105.47
MW-39	Shallow	124.6	23.01	101.59	23.05	101.55	23.00	101.60	24.51	100.09	NA	NA	23.93	100.67
MW-42	Shallow	125.9	19.55	106.35	19.68	106.22	19.67	106.23	19.95	105.95	NA	NA	19.82	106.08
MW-43	Shallow	122.8	20.92	101.88	21.11	101.69	20.90	101.90	21.73	101.07	NA	NA	21.66	101.14
MW-44	Shallow	127.1	17.23	109.87	17.31	109.79	17.27	109.83	17.18	109.92	NA	NA	17.00	110.10
MW-45	Shallow	126.7	13.75	112.97	13.67	113.05	13.60	113.12	13.20	113.52	NA	NA	13.80	112.92
RW-1S	Shallow	122.9	20.60	102.30	20.80	102.10	20.79	102.11	21.49	101.41	NA	NA	21.98	100.92
RW-2S	Shallow	123.5	29.14	94.36	29.61	93.89	29.74	93.76	32.10	91.40	NA	NA	30.76	92.74
RW-3S	Shallow	125.4	23.73	101.67	24.32	101.08	24.46	100.94	26.20	99.20	NA	NA	28.47	96.93
MW-1D	Deep	129.4	56.37	73.03	56.40	73.00	56.29	73.11	56.70	72.70	58.17	71.23	58.09	71.31
MW-16D	Deep	124.1	37.94	86.16	37.98	86.12	38.08	86.02	41.1	83.00	40.71	83.39	40.63	83.47
MW-21D	Deep	126.3	47.58	78.72	47.54	78.76	47.61	78.69	56.7	69.60	50.61	75.69	50.53	75.77
MW-22D	Deep	128.9	43.73	85.12	43.82	85.03	43.81	85.04	46.71	82.14	46.74	82.11	46.25	82.60
MW-23D	Deep	125.2	36.61	88.59	36.71	88.49	36.77	88.43	39.9	85.30	39.21	85.99	39.04	86.16
MW-24D	Deep	129.1	48.29	80.81	48.35	80.75	48.37	80.73	55.82	73.28	52.15	76.95	51.99	77.11
MW-27D	Deep	117.2	28.03	89.17	28.21	88.99	28.21	88.99	31.11	86.09	30.52	86.68	30.34	86.86
MW-40D	Deep	124.1	37.85	86.25	38.01	86.09	38.04	86.06	41.00	83.10	40.75	83.35	40.50	83.60
MW-41D	Deep	127.1	44.43	82.67	44.61	82.49	44.62	82.48	49.18	77.92	47.94	79.16	47.71	79.39
MW-46D	Deep	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
RW-1D	Deep	126.9	59.26	67.64	58.88	68.02	58.99	67.91	60.23	66.67	62.62	64.28	63.62	63.28
RW-2D	Deep	127.4	68.63	58.77	68.70	58.70	68.44	58.96	70.11	57.29	68.90	58.50	68.95	58.45

a/ Vertical datum is NAVD-88

NM = not measured

TOC = top of casing

NA = not available because the well had not been installed

Light gray shading denotes wells screened in the shallow (unconfined) zone; blue shading denotes wells screened in the deep (confined) zone.

Continuous pumping of the groundwater recovery well system started on March 29, 2017.

Water levels from both shallow and deep recovery wells were measured in piezometers co-located with the wells.

b/ Water level measurements representative of non-pumping conditions in the aquifer system.

Table 1

**Historical Water Level Measurements in  
Onsite Monitoring Wells and Recovery Well Piezometers  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 to June 2022) (a)**

Well ID	Zone	TOC elevation	5/30/2018		11/7/2018		5/21/2019		11/19/2019		5/12/2020	
			Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-01	Shallow	129.8	15.52	114.28	13.99	115.81	13.98	115.82	16.47	113.33	15.67	114.13
MW-03	Shallow	113.6	7.17	106.43	6.43	107.17	7.08	106.52	7.02	106.58	6.09	107.51
MW-04	Shallow	124.4	10.19	114.21	9.16	115.24	8.80	115.60	11.07	113.33	11.00	113.40
MW-5R	Shallow	123.5	15.89	107.61	15.51	107.99	15.74	107.76	16.61	106.89	16.55	106.95
MW-09	Shallow	125.1	10.78	114.32	9.16	115.94	9.61	115.49	12.00	113.10	11.57	113.53
MW-16	Shallow	124.0	11.76	112.24	10.96	113.04	9.37	114.63	12.43	111.57	11.66	112.34
MW-18	Shallow	125.1	23.80	101.30	23.13	101.97	22.97	102.13	21.12	103.98	23.10	102.00
MW-20	Shallow	125.4	12.15	113.25	11.74	113.66	10.64	114.76	12.98	112.42	12.57	112.83
MW-38R	Shallow	125.4	19.35	106.05	18.67	106.73	19.13	106.27	19.83	105.57	19.03	106.37
MW-39	Shallow	124.6	23.72	100.88	23.09	101.51	23.00	101.60	23.94	100.66	23.04	101.56
MW-42	Shallow	125.9	19.16	106.74	18.55	107.35	18.91	106.99	19.44	106.46	18.85	107.05
MW-43	Shallow	122.8	20.47	102.33	20.60	102.20	21.46	101.34	22.04	100.76	20.98	101.82
MW-44	Shallow	127.1	16.32	110.78	15.78	111.32	15.91	111.19	17.24	109.86	16.30	110.80
MW-45	Shallow	126.7	12.98	113.74	12.00	114.72	11.75	114.97	14.55	112.17	NM	-
RW-1S	Shallow	122.9	22.88	100.02	23.97	98.93	26.42	96.48	28.64	94.26	29.16	93.74
RW-2S	Shallow	123.5	28.37	95.13	27.48	96.02	31.16	92.34	31.70	91.80	33.33	90.17
RW-3S	Shallow	125.4	26.91	98.49	24.39	101.01	22.10	103.30	23.24	102.16	22.85	102.55
MW-1D	Deep	129.4	58.03	71.37	57.22	72.18	56.55	72.85	59.49	69.91	57.17	72.23
MW-16D	Deep	124.1	40.37	83.73	39.33	84.77	38.30	85.80	40.99	83.11	38.67	85.43
MW-21D	Deep	126.3	50.38	75.92	49.61	76.69	48.38	77.92	50.75	75.55	48.50	77.80
MW-22D	Deep	128.9	46.30	82.55	35.31	93.54	44.02	84.83	46.20	82.65	44.05	84.80
MW-23D	Deep	125.2	38.87	86.33	37.72	87.48	36.88	88.32	39.40	85.80	37.16	88.04
MW-24D	Deep	129.1	50.94	78.16	50.72	78.38	49.67	79.43	51.12	77.98	48.80	80.30
MW-27D	Deep	117.2	30.20	87.00	29.17	88.03	28.15	89.05	30.68	86.52	28.64	88.56
MW-40D	Deep	124.1	40.44	83.66	39.60	84.50	38.50	85.60	41.16	82.94	38.59	85.51
MW-41D	Deep	127.1	47.56	79.54	46.56	80.54	45.42	81.68	48.50	78.60	45.28	81.82
MW-46D	Deep	124.8	37.37	87.40	32.65	92.12	35.47	89.30	37.90	86.87	35.73	89.04
RW-1D	Deep	126.9	62.75	64.15	62.97	63.93	62.44	64.46	64.86	62.04	NM	-
RW-2D	Deep	127.4	69.21	58.19	68.34	59.06	68.19	59.21	71.36	56.04	69.35	58.05

a/ Vertical datum is NAVD-88

NM = not measured

TOC = top of casing

NA = not available because the well had not been installed

Light gray shading denotes wells screened in the shallow (unconfined) zone; blue shading denotes wells screened in the deep (confined) zone.

Continuous pumping of the groundwater recovery well system started on March 29, 2017.

Water levels from both shallow and deep recovery wells were measured in piezometers co-located with the wells.

b/ Water level measurements representative of non-pumping conditions in the aquifer system.

Table 1

**Historical Water Level Measurements in  
Onsite Monitoring Wells and Recovery Well Piezometers  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 to June 2022) (a)**

Well ID	Zone	TOC elevation	11/22/2020		5/9/2021		11/14/2021 (b)		6/26/2022 (b)	
			Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-01	Shallow	129.8	15.58	114.22	14.75	115.05	15.35	114.45	14.85	114.95
MW-03	Shallow	113.6	6.1	107.50	6.4	107.20	5.86	107.74	6.21	107.39
MW-04	Shallow	124.4	10.85	113.55	9.75	114.65	10.43	113.97	9.90	114.50
MW-5R	Shallow	123.5	15.84	107.66	NM	-	13.52	109.98	14.36	109.14
MW-09	Shallow	125.1	11.23	113.87	10.35	114.75	10.85	114.25	10.50	114.60
MW-16	Shallow	124.0	11.68	112.32	11.15	112.85	11.05	112.95	11.22	112.78
MW-18	Shallow	125.1	23.80	101.30	26.71	98.39	21.42	103.68	22.05	103.05
MW-20	Shallow	125.4	12.11	113.29	11.22	114.18	11.34	114.06	14.41	110.99
MW-38R	Shallow	125.4	19.25	106.15	18.55	106.85	15.63	109.77	17.66	107.74
MW-39	Shallow	124.6	23.52	101.08	22.98	101.62	21.29	103.31	22.22	102.38
MW-42	Shallow	125.9	NM	-	17.98	107.92	15.64	110.26	NM	-
MW-43	Shallow	122.8	21.91	100.89	21.02	101.78	20.10	102.70	20.47	102.33
MW-44	Shallow	127.1	16.52	110.58	16.26	110.84	15.21	111.89	15.80	111.30
MW-45	Shallow	126.7	13.61	113.11	12.69	114.03	13.35	113.37	12.91	113.81
RW-1S	Shallow	122.9	28.13	94.77	25.00	97.90	13.28	109.62	NM	-
RW-2S	Shallow	123.5	35.31	88.19	34.85	88.65	16.02	107.48	NM	-
RW-3S	Shallow	125.4	26.72	98.68	25.36	100.04	15.69	109.71	NM	-
MW-1D	Deep	129.4	59.91	69.49	57.46	71.94	45.20	84.20	47.46	81.94
MW-16D	Deep	124.1	39.97	84.13	38.81	85.29	37.06	87.04	NM	-
MW-21D	Deep	126.3	50.37	75.93	48.64	77.66	41.50	84.80	43.11	83.19
MW-22D	Deep	128.9	46.55	82.30	44.72	84.13	43.36	85.49	44.90	83.95
MW-23D	Deep	125.2	39.22	85.98	37.36	87.84	36.73	88.47	38.36	86.84
MW-24D	Deep	129.1	53.02	76.08	50.01	79.09	49.40	79.70	51.06	78.04
MW-27D	Deep	117.2	30.62	86.58	28.89	88.31	28.72	88.48	29.82	87.38
MW-40D	Deep	124.1	40.97	83.13	39.00	85.10	37.48	86.62	40.04	84.06
MW-41D	Deep	127.1	48.65	78.45	45.95	81.15	44.51	82.59	46.96	80.14
MW-46D	Deep	124.8	37.72	87.05	35.95	88.82	35.62	89.15	37.13	87.64
RW-1D	Deep	126.9	NM	-	NM	-	41.71	85.19	NM	-
RW-2D	Deep	127.4	69.72	57.68	69.41	57.99	43.90	83.50	NM	-

a/ Vertical datum is NAVD-88

NM = not measured

TOC = top of casing

NA = not available because the well had not been installed

Light gray shading denotes wells screened in the shallow (unconfined) zone; blue shading denotes wells screened in the deep (confined) zone.

Continuous pumping of the groundwater recovery well system started on March 29, 2017.

Water levels from both shallow and deep recovery wells were measured in piezometers co-located with the wells.

b/ Water level measurements representative of non-pumping conditions in the aquifer system.

Table 2

June 2022 Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland (a)

Parameters	Well ID:	Shallow Wells												Deep Wells							
		MW-01	MW-03	MW-04	MW-5R	MW-09	MW-16	MW-18	MW-20	MW-38R	MW-39	MW-43	MW-44	MW-1D	MW-21D	MW-22D	MW-23D	MW-27D	MW-40D	MW-41D	
<b>Groundwater Cleanup Standards (ug/L) (b)</b>																					
Chloroethane	2,100	1 U	1 U	1 U	1 U	1 U	42.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	1 U	1 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	2.8	1 U	1 U	<b>173</b>	1 U	<b>3</b>	<b>1,030</b>	1 U	<b>294</b>	<b>7.6</b>	1 U	2.5	2.3	<b>3.1</b>	1 U	1 U	<b>34.6</b>	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	1 U	1 U	3.1	1 U	1 U	1 U	1 U	<b>10.8</b>	1 U	1 U	<b>29.4</b>	1 U	1 U	1 U	1.5	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	1 U	1 U	<b>339</b>	1 U	<b>57.7</b>	<b>1,210</b>	1 U	<b>426</b>	1 U	1 U	1 U	3.2	<b>19.1</b>	<b>24.5</b>	<b>9</b>	<b>138</b>	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	15 (c)	0.23	0.23	<b>86.8</b>	1.0	4.5	<b>26.4</b>	1 U	<b>377</b>	14.4	0.22	7	2.5	4.0	4.2	1.6	<b>27.0</b>	0.13	0.18	0.62	0.62
Ethylbenzene	700	1 U	1 U	1 U	1 U	1 U	1.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	1 U	1 U	1 U	1 U	1 U	1.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.9	1 U	1 U	1.1	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1 U	1 U	<b>5.5</b>	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	1 U	1 U	1.8	1.2	1 U	<b>1,610</b>	1 U	1 U	1 U	1 U	1 U	5.9	1.3	1 U	1 U	10.7	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	3	1 U	1 U	<b>13.8</b>	1 U	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	<b>2.3</b>	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	10,000	3 U	3 U	3 U	3 U	3 U	6.8	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U

a/ U = not detected above the method detection limit; ID = identification

**Bolded values indicate an exceedance of the Groundwater Quality Standards**

All sample concentrations in micrograms per liter (ug/L)

b/ All cleanup standards, except for 1,4-dioxane, are equal to the Maryland Generic Numeric Cleanup Standards for Groundwater

Type I and II Aquifers, from the State of Maryland Interim Final Guidance (October 2018). Accessed May 27, 2020

<https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/www.mde.state.md.us/assets/doc>

c/ Numeric cleanup standards from WSP's October 2, 2015, Response Action Plan, Revision 2.

Table 5

**Historical Monitoring Well Sampling Results**  
**Former Kop-Flex Facility Site**  
**Hanover, Maryland**  
**(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-01</b>	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23	2.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-03</b>	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.6	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-04</b>	12/7/2016	10.0 U	<b>259</b>	10.0 U	<b>1,020</b>	10.0 U	<b>576</b>	20.0 U	4.0 U	31.7	10.0 U	10.0 U	10.0 U
	5/2/2017	4.0 U	<b>103</b>	4.0 U	<b>459</b>	4.0 U	<b>252</b>	8.0 U	4.0 U	13.0	4.0 U	4.0 U	4.0 U
	11/15/2017	5.0 U	<b>29.2</b>	1.0 J	<b>151</b>	1.0 U	<b>121</b>	<b>10.5</b>	0.687 J	4.3	1.0 U	1.4	1.0 U
	5/30/2018	1.0 U	<b>33.3</b>	1.0 U	<b>153</b>	1.0 U	<b>92.7</b>	2.0 U	1.0 U	4.0	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>23.3</b>	1.0 U	<b>89.9</b>	1.0 U	1.0 U	2.0 U	1.0 U	1.6	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	<b>57.7</b>	1.1	<b>142</b>	1.0 U	<b>111</b>	5.0 U	1.0 U	1.7	1.0 U	1.1	1.0 U
	11/19/2019	1.0 U	<b>45.1</b>	1.1	<b>126</b>	1.0 U	<b>94.2</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/13/2020	1.0 U	<b>58.6</b>	1.3	<b>149</b>	1.0 U	<b>84.6</b>	5.0 U	1.0 U	1.4	1.2	1.2	1.0 U
	11/22/2020	1.0 U	<b>62.0</b>	1.6	<b>141</b>	1.0 U	<b>151</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.2	1.0 U
	5/9/2021	2.5 U	<b>130</b>	2.9	<b>361</b>	2.5 U	<b>303</b>	12.5 U	2.5 U	3.4	2.5 U	2.5 U	2.5 U
	11/14/2021	1.0 U	<b>82.7</b>	1.2	<b>175</b>	1.0 U	<b>134</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.5	1.0 U
	6/26/2022	1.0 U	<b>173</b>	3.1	<b>339</b>	1.0 U	<b>87</b>	5.0 U	1.0 U	1.8	1.0 U	3.0	1.0 U
<b>MW-5R</b>	12/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	<b>16.5</b>	2.0 U	1.0 U	1.4	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	1.4	1.0 U	1.4	1.0 U	<b>16.5</b>	2.0 U	1.0 U	2.7	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	1.6	1.0 U	2.5	1.0 U	11.0	<b>10.2</b>	1.0 U	1.7	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.8	1.0 U	2.7	1.0 U	11.5	2.0 U	1.0 U	1.4	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	1.0 U	1.0 U	1.3	1.0 U	2.0 U	2.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	7.6	5.0 U	1.0 U	1.9	1.0 U	1.0 U	1.0 U

Table 5

**Historical Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-5R</b>	11/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	6.8	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	1.8	1.0 U	1.7	1.0 U	13.4	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.6	1.0 U	1.4	1.0 U	12.0	5.0 U	1.0 U	2.4	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0	5.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U
<b>MW-09</b>	12/8/2016	1.0 U	<b>4.5</b>	1.0 U	<b>104</b>	1.0 U	<b>95.5</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	<b>2.9</b>	1.0 U	<b>63.8</b>	1.0 U	<b>20.8</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	<b>3.1</b>	0.4 J	<b>60.2</b>	1.0 U	<b>32.4</b>	5.0 U	1.0 U	0.7 J	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	2.2	1.0 U	<b>49.2</b>	1.0 U	<b>23.4</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>4.5</b>	1.0 U	<b>75.9</b>	1.0 U	<b>37.4</b>	2.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	<b>3.6</b>	1.0 U	<b>70.8</b>	1.0 U	<b>32.8</b>	5.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	2.6	1.0 U	<b>48.7</b>	1.0 U	<b>24.4</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/13/2020	1.0 U	2.6	1.0 U	<b>50.5</b>	1.0 U	<b>18.7</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	2.5	1.0 U	<b>56.4</b>	1.0 U	<b>25.7</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	<b>3.0</b>	1.0 U	<b>56.3</b>	1.0 U	<b>23.6</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	2.5	1.0 U	<b>53.3</b>	1.0 U	<b>22.6</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	<b>3.0</b>	1.0 U	<b>57.7</b>	1.0 U	4.5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	<b>MW-16</b>	12/8/2016	200 U	<b>6,420</b>	200 U	<b>26,200</b>	200 U	<b>1,450</b>	400 U	100 U	<b>4,390</b>	200 U	200 U
5/2/2017		225	<b>7,910</b>	100 U	<b>10,500</b>	100 U	<b>971</b>	200 U	100 U	<b>8,930</b>	100 U	100 U	100 U
11/15/2017		732	<b>7,110</b>	<b>22</b>	<b>7,740</b>	46	<b>836</b>	<b>11</b>	<b>18.4</b>	<b>5,590</b>	1.0 U	<b>69</b>	<b>19</b>
5/30/2018		249	<b>6,250</b>	50 U	<b>4,690</b>	50 U	<b>636</b>	100 U	50 U	<b>7,360</b>	50 U	50 U	50 U
11/7/2018		275	<b>7,360</b>	50 U	<b>7,800</b>	50 U	<b>866</b>	100 U	50 U	<b>6,420</b>	50 U	<b>74.2</b>	50 U
5/22/2019		10 U	<b>343</b>	10 U	<b>1,160</b>	10 U	<b>1,230</b>	50 U	10 U	<b>216</b>	10 U	<b>13.7</b>	10 U
11/19/2019		23.4	<b>608</b>	10 U	<b>1,440</b>	10 U	<b>81.9</b>	50 U	10 U	<b>314</b>	10 U	<b>18.3</b>	10 U
5/13/2020		10.9	<b>394</b>	5 U	<b>571</b>	5 U	<b>39.2</b>	5 U	5 U	<b>487</b>	5 U	<b>10.7</b>	5 U
11/22/2020		20.0 U	<b>1,560</b>	20 U	<b>1,130</b>	20 U	<b>84.2</b>	100 U	20 U	<b>2,060</b>	5 U	20.0 U	20 U
5/9/2021		4.2	<b>169</b>	2 U	<b>276</b>	2.1	<b>19.3</b>	10 U	2.2	123	2 U	<b>6.2</b>	2 U
11/14/2021		12.5 U	<b>1,350</b>	12.5 U	<b>1,630</b>	12.5 U	<b>76.0</b>	62.5 U	12.5 U	<b>1,720</b>	12.5 U	12.5 U	12.5 U
6/26/2022		42.6	<b>1,030</b>	1.0 U	<b>1,210</b>	1.0 U	<b>26.4</b>	1.4	<b>5.5</b>	<b>1,610</b>	1.0 U	<b>13.8</b>	<b>2.3</b>

Table 5

**Historical Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-18</b>	12/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	<b>24.9</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-20</b>	12/9/2016	2.0 U	<b>99.7</b>	<b>5.1</b>	<b>173</b>	2.0 U	<b>767</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	5/2/2017	2.0 U	<b>161</b>	<b>7.3</b>	<b>286</b>	2.0 U	<b>967</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	11/15/2017	5.0 U	<b>136</b>	<b>5.7</b>	<b>223</b>	1.4	<b>969</b>	5.0 U	1.0 U	1.0 U	1.9	1.0 U	1.0 U
	5/30/2018	2.0 U	<b>115</b>	<b>5.5</b>	<b>205</b>	2.0 U	<b>966</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	11/7/2018	2.5 U	<b>145</b>	<b>6.3</b>	<b>233</b>	2.5 U	<b>986</b>	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
	5/21/2019	2.0 U	<b>157</b>	<b>6.5</b>	<b>226</b>	2.0 U	<b>1,620</b>	10.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	11/19/2019	2.0 U	<b>175</b>	<b>7.5</b>	<b>244</b>	2.0 U	<b>1,220</b>	10.0 U	2.0 U	2.0 U	2.1	2.0 U	2.0 U
	5/13/2020	2.0 U	<b>188</b>	<b>7.7</b>	<b>232</b>	2.0 U	<b>1,000</b>	10.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	11/22/2020	2.0 U	<b>205</b>	<b>7.5</b>	<b>272</b>	2.0 U	<b>1,260</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	5/9/2021	2.0 U	<b>214</b>	<b>7.5</b>	<b>267</b>	2.2	<b>1,010</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	11/14/2021	2.0 U	<b>256</b>	<b>8.7</b>	<b>321</b>	2.0 U	<b>1,210</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	6/26/2022	1.0 U	<b>294</b>	<b>10.8</b>	<b>426</b>	2.9	<b>377</b>	5.0 U	1.0 U	1.0 U	2.7	2.7	1.0 U
<b>MW-38R</b>	12/9/2016	1.0 U	<b>3.8</b>	1.0 U	1.0 U	1.0 U	<b>18.3</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	<b>6.0</b>	1.0 U	1.0 U	1.0 U	<b>42.6</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	<b>8.3</b>	1.0 U	1.0 U	1.0 U	<b>62.5</b>	<b>8.1</b>	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	<b>4.3</b>	1.0 U	1.0 U	1.0 U	<b>40.7</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>6.9</b>	1.0 U	1.0 U	1.0 U	<b>39.4</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	<b>4.7</b>	1.0 U	1.0 U	1.0 U	<b>43.2</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	<b>7.7</b>	1.0 U	1.0 U	1.0 U	<b>51.5</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	<b>6.2</b>	1.0 U	1.0 U	1.0 U	<b>40.8</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 5

Historical Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 - May 2020) (a)

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-38R</b>	11/22/2020	1.0 U	<b>6.5</b>	1.0 U	1.0 U	1.0 U	<b>40.9</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	<b>5.5</b>	1.0 U	1.0 U	1.0 U	<b>47.0</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2021	1.0 U	<b>6.7</b>	1.0 U	1.0 U	1.0 U	<b>46.2</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	<b>7.6</b>	1.0 U	1.0 U	1.0 U	<b>14.4</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-39</b>	12/7/2016	1.0 U	1.0 U	1.0 U	1.7	1.0 U	2.5	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	1.0 U	1.0 U	1.1	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	1.0 U	1.0 U	0.6 J	1.0 U	2.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	<b>MW-42</b>	12/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.8	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/1/2017		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
11/15/2017		5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	<b>19.3</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/30/2018		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	7.4	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
11/7/2018		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.3	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/21/2019		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
11/19/2019		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/12/2020		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	11.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1/6/2021		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	13.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/9/2021		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	13.3	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
11/14/2021		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	12.5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U



Table 5

**Historical Monitoring Well Sampling Results**  
**Former Kop-Flex Facility Site**  
**Hanover, Maryland**  
**(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-43</b>	12/7/2016	2.0 U	<b>15.9</b>	2.1	<b>171</b>	2.0 U	<b>237</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	5/1/2017	2.0 U	<b>21.3</b>	2.1	<b>177</b>	2.0 U	<b>206</b>	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	11/15/2017	5.0 U	<b>15.9</b>	1.3	<b>159</b>	1.0 U	<b>165</b>	5.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U
	5/30/2018	2.0 U	<b>5.9</b>	1.0 U	<b>68</b>	1.0 U	<b>57.6</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>13.8</b>	1.2	<b>118</b>	1.0 U	<b>107</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.3	1.0 U
	5/21/2019	1.0 U	<b>5.2</b>	1.0 U	<b>53.9</b>	1.0 U	<b>52.0</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	<b>4.3</b>	1.0 U	<b>48.5</b>	1.0 U	<b>55.2</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	<b>3.8</b>	1.0 U	<b>46.3</b>	1.0 U	<b>49.0</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	<b>2.9</b>	1.0 U	<b>31.8</b>	1.0 U	<b>42.7</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	2.7	1.0 U	<b>31.7</b>	1.0 U	<b>34.1</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	2.6	1.0 U	<b>31.3</b>	1.0 U	<b>34.3</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	2.5	1.0 U	<b>29.4</b>	1.0 U	<b>7.0</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-44</b>	12/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	<b>6.6</b>	1.0 U	5.9	1.0 U	<b>49.1</b>	2.0 U	1.0 U	27.7	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.4	1.0 U	1.4	1.0 U	8.4	2.0 U	1.0 U	4.9	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	<b>14.9</b>	1.0 U	<b>22.4</b>	1.0 U	<b>64.4</b>	5.0 U	1.0 U	74.3	1.0 U	1.0 U	1.0 U
	5/13/2020	1.0 U	<b>3.0</b>	1.0 U	4.1	1.0 U	<b>17.7</b>	5.0 U	1.0 U	11.9	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.7	1.0 U	2.9	1.0 U	10.2	5.0 U	1.0 U	6.9	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	<b>3.8</b>	1.0 U	<b>7.2</b>	1.0 U	13.3	5.0 U	1.0 U	15.4	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	<b>2.3</b>	1.0 U	<b>3.2</b>	1.0 U	2.5	5.0 U	1.0 U	5.9	1.0 U	1.0 U	1.0 U
<b>MW-1D</b>	1/2/2017	2.0 U	<b>72</b>	4.7	<b>375</b>	2.0 U	<b>236</b>	4.0 U	2.5 U	37.5	2.0 U	2.0 U	2.0 U
	5/3/2017	2.5 U	<b>105</b>	<b>5.7</b>	<b>407</b>	2.5 U	<b>329</b>	5.0 U	2.5 U	37.1	2.5 U	2.5 U	2.5 U
	11/15/2017	5.0 U	<b>80</b>	3.8	<b>277</b>	0.6 J	<b>243</b>	5.0 U	0.519 J	29.8	0.8 J	1.7	1 U
	5/30/2018	1.0 U	<b>14.9</b>	1.0 U	<b>71.4</b>	1.0 U	<b>64.4</b>	2.0 U	1.0 U	5.3	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>7.1</b>	1.0 U	<b>38.8</b>	1.0 U	2.0 U	2.0 U	1.0 U	3.3	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	2.1	1.0 U	<b>13.7</b>	1.0 U	12.8	5.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	<b>3.4</b>	1.0 U	<b>17.7</b>	1.0 U	<b>17.9</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/18/2020	1.0 U	2.6	1.0 U	<b>16.5</b>	1.0 U	12.8	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	<b>3.1</b>	1.0 U	<b>17.6</b>	1.0 U	<b>16.9</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.8	1.0 U	<b>12.2</b>	1.0 U	9.0	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	<b>3.8</b>	1.0 U	<b>22.4</b>	1.0 U	<b>16.5</b>	5.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U
6/26/2022	1.0 U	<b>3.1</b>	1.0 U	<b>19.1</b>	1.0 U	<b>4.0</b>	5.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	

Table 5

**Historical Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-16D</b>	12/8/2016	2.0 U	<b>56.6</b>	2.9	<b>254</b>	2.0 U	<b>202</b>	4.0 U	2.0 U	21	2.0 U	2.0 U	2.0 U
	5/2/2017	2.0 U	<b>43.7</b>	2.9	<b>235</b>	2.0 U	<b>182</b>	4.0 U	2.0 U	16.4	2.0 U	2.0 U	2.0 U
	11/15/2017	5.0 U	<b>29.7</b>	1.9	<b>179</b>	0.3 J	<b>192</b>	<b>10.0</b>	1.0 U	15.1	0.5 J	0.9 J	1.0 U
	5/30/2018	1.0 U	<b>26.4</b>	1.6	<b>180</b>	1.0 U	<b>153</b>	2.0 U	1.0 U	10.3	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>27.5</b>	1.8	<b>161</b>	1.0 U	<b>158</b>	2.0 U	1.0 U	12.5	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	<b>28.5</b>	2.1	<b>172</b>	1.0 U	<b>148</b>	5.0 U	1.0 U	14.5	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	<b>25.6</b>	1.7	<b>133</b>	1.0 U	<b>140</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/13/2020	1.0 U	<b>29.1</b>	1.9	<b>145</b>	1.0 U	<b>130</b>	5.0 U	1.0 U	11.7	1.0 U	1.0 U	1.0 U
	12/8/2020	1.0 U	<b>25.9</b>	1.6	<b>127</b>	1.0 U	<b>105</b>	5.0 U	1.0 U	10.1	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	<b>27.7</b>	1.7	<b>130</b>	1.0 U	<b>107</b>	5.0 U	1.0 U	9.5	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	<b>21.5</b>	1.1	<b>98.7</b>	1.0 U	<b>84.5</b>	5.0 U	1.0 U	6.9	1.0 U	1.0 U	1.0 U
<b>MW-21D</b>	12/16/2016	1.0 U	2.6	1.0 U	<b>23.4</b>	1.0 U	<b>18.6</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	<b>6.9</b>	1.4	<b>111</b>	1.0 U	<b>57.5</b>	2.0 U	1.0 U	2.3	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	2.0	1.0 U	<b>14.4</b>	1.0 U	<b>18.5</b>	5.0 U	1.0 U	0.7 J	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0	1.0 U	<b>38.8</b>	1.0 U	<b>32.2</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	1.0 U	1.0 U	<b>30.0</b>	1.0 U	<b>18.0</b>	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	<b>9.9</b>	1.0 U	8.4	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	1.0 U	1.0 U	4.1	1.0 U	4.1	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/18/2020	1.0 U	1.0 U	1.0 U	<b>13.6</b>	1.0 U	7.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	1.0 U	1.0 U	<b>7.8</b>	1.0 U	5.1	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	4.1	1.0 U	2.8	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	<b>18.7</b>	1.0 U	12.9	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
6/26/2022	1.0 U	1.0 U	1.0 U	<b>24.5</b>	1.0 U	4.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
<b>MW-22D</b>	12/7/2016	1.0 U	2.5	1.0 U	<b>31.5</b>	1.0 U	<b>24.5</b>	2.0 U	1.0 U	4.1	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	2.5	1.0 U	<b>36.9</b>	1.0 U	<b>24.6</b>	2.0 U	1.0 U	3.7	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	1.72	1.0 U	<b>24.4</b>	1.0 U	<b>19.6</b>	5.0 U	1.0 U	2.8	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	<b>13.1</b>	1.0 U	7.9	2.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	1.0 U	1.0 U	<b>9.7</b>	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	6.3	1.0 U	5.1	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	1.0 U	1.0 U	5.6	1.0 U	4.9	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 5

**Historical Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-22D</b>	5/18/2020	1.0 U	1.0 U	1.0 U	6.2	1.0 U	4.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	1.0 U	1.0 U	<b>7.1</b>	1.0 U	4.9	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	5.9	1.0 U	4.0	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	6.2	1.0 U	5.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	<b>9.0</b>	1.0 U	1.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-23D</b>	1/2/2017	2.0 U	<b>26.4</b>	2.0 U	<b>140</b>	2.0 U	<b>151</b>	<b>8.3</b>	1.0 U	17.0	2.0 U	2.0 U	2.0 U
	5/1/2017	2.0 U	<b>39.1</b>	2.4	<b>208</b>	2.0 U	<b>177</b>	4.0 U	2.0 U	19.9	2.0 U	2.0 U	2.0 U
	11/15/2017	5.0 U	<b>31.1</b>	1.9	<b>179</b>	0.3 J	<b>158</b>	5.0 U	0.417 J	19.3	0.4 J	0.9 J	1.0 U
	5/30/2018	1.0 U	<b>30.5</b>	1.6	<b>172</b>	1.0 U	<b>148</b>	2.0 U	1.0 U	14.8	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	<b>36.2</b>	1.9	<b>185</b>	1.0 U	<b>146</b>	2.0 U	1.0 U	17.0	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	<b>18.5</b>	1.2	<b>96.4</b>	1.0 U	<b>70.7</b>	5.0 U	1.0 U	8.6	1.0 U	1.0 U	1.0 U
	11/19/2019	1.0 U	<b>22.7</b>	1.4	<b>107</b>	1.0 U	<b>109</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/13/2020	1.0 U	<b>35.2</b>	1.8	<b>142</b>	1.0 U	<b>112</b>	5.0 U	1.0 U	13.6	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	<b>26.3</b>	1.2	<b>106</b>	1.0 U	<b>96.7</b>	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	<b>31.8</b>	1.5	<b>126</b>	1.0 U	<b>99.0</b>	5.0 U	1.0 U	11.7	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	<b>28.5</b>	1.1	<b>110</b>	1.0 U	<b>92.4</b>	5.0 U	1.0 U	9.2	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	<b>34.6</b>	1.5	<b>138</b>	1.0 U	<b>27.0</b>	5.0 U	1.0 U	10.7	1.0 U	1.0 U	1.0 U
	<b>MW-27D</b>	12/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/1/2017		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.6	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/30/2018		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/21/2019		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/13/2020		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
5/9/2021		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
11/14/2021		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
6/26/2022		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-40D</b>	12/9/2016	1.0 U	<b>2.9</b>	1.0 U	<b>18.1</b>	1.0 U	9.4	2.0 U		1.0 U	1.0 U	1.0 U	1.0 U
	5/1/2017	1.0 U	<b>3.1</b>	1.0 U	<b>17.4</b>	1.0 U	8.5	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2017	5.0 U	0.9 J	1.0 U	5.2	1.0 U	5.2	<b>9.7</b>	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	2.9	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/7/2018	1.0 U	1.0 U	1.0 U	4.4	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 5

**Historical Monitoring Well Sampling Results  
Former Kop-Flex Facility Site  
Hanover, Maryland  
(December 2016 - May 2020) (a)**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl chloride
<b>Groundwater Cleanup Standards (b)</b>		2,100	2.8	5	7	70	15 (c)	5	5	200	5	5	2
<b>MW-40D</b>	11/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/18/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
<b>MW-41D</b>	12/16/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.8	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.4	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	1.1	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/21/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.1	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/18/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/9/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/14/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/26/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

a/ U = not detected above the method detection limit

**Bolded values indicate an exceedence of the Groundwater Quality Standards**

All sample concentrations in micrograms per liter (µg/l)

b/ All cleanup standards, except for 1,4-dioxane, are equal to the Maryland Generic Numeric Cleanup Standards for Groundwater, Type I and II Aquifers, from the State of Maryland Interim Final Guidance (October 2018). Accessed May 27, 2020:

<https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/www.mde.state.md.us/assets/document/MDE>

c/ Numeric cleanup standards from WSP's October 2, 2015, Response Action Plan, Revision 2.

Table 4

**June 2022 Recovery Well Sampling Results  
Former Kop-Flex Facility  
Hanover, Maryland (a)**

<u>Parameters</u>	<u>Groundwater Cleanup Standards (µg/L) (b)</u>	<u>Shallow Wells</u>			<u>Deep Wells</u>	
		<u>Well ID:</u> <u>RW-1S</u>	<u>RW-2S</u>	<u>RW-3S</u>	<u>RW-1D</u>	<u>RW-2D</u>
<b>VOCs</b>						
Chloroethane	2,100	17.9	1.0 U	1.0 U	6.2	1.0 U
1,1-Dichloroethane	2.8	<b>144</b>	<b>133</b>	<b>3.1</b>	<b>59.9</b>	<b>27.1</b>
1,2-Dichloroethane	5	2.4	1.0 U	1.0 U	1.7	1.3
1,1-Dichloroethene	7	<b>537</b>	<b>726</b>	5.8	<b>242</b>	<b>125</b>
cis-1,2-Dichloroethene	70	2.9	1.0 U	1.0 U	2.3	1.0 U
1,4-Dioxane	15 (c)	<b>136</b>	<b>276</b>	5.9	<b>36.2</b>	<b>39.2</b>
Methylene chloride	15	1.0 U	10.3	1.0 U	1.0 U	1.0 U
Toulene	1,000	1.0 U	3.2	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	200	75.4	<b>800</b>	7.8	8.3	5.4
Trichloroethene	5	3.7	<b>9.8</b>	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	<b>5.3</b>	1.0 U	1.0 U	1.0 U	1.0 U
<b>Total Detected CVOCs + 1,4-Dioxane</b>		<i>925</i>	<i>1,958</i>	<i>22.6</i>	<i>357</i>	<i>198</i>

a/ U = not detected above the method detection limit

**Bolded values indicate an exceedence of the Groundwater Quality Standards**

All sample concentrations in micrograms per liter (µg/l)

b/ All cleanup standards, except for 1,4-dioxane, are equal to the Maryland Generic Numeric Cleanup Standards for Groundwater, Type I and II Aquifers, from the State of Maryland Interim Final Guidance (October 2018). Accessed May 27, 2020:

<https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/www.mde.state.md.us/assets/docu>

c/ Numeric cleanup standards from WSP's October 2, 2015, Response Action Plan, Revision 2.

ENCLOSURE A – SUBMITTAL TO ANNE ARUNDEL COUNTY PRE-TREATMENT  
PROGRAM OF BOILER BLOWDOWN PH STUDY RESULTS



## VIA ELECTRONIC MAIL

May 27, 2022

Chris Tait  
Regulatory Compliance Program Manager  
Pre-treatment Program  
Department of Public Works  
2662 Riva Road WWD MS 7408  
Annapolis, MD 21401

**Subject: Results of Short-Term pH Study of Boiler Blowdown Discharge  
EMERSUB 16 LLC Treatment Building, Harmans Road, Hanover, Maryland  
Wastewater Discharge Permit No. 210020**

Dear Mr. Tait:

On behalf of EMERSUB 16, LLC (EMERSUB 16), WSP USA Inc. (WSP) has prepared this letter summarizing the results of a recent wastewater discharge pH monitoring study completed with respect to the effluent limitations specified in the Wastewater Discharge Permit No. 210020 (Permit) issued to EMERSUB 16 by the Anne Arundel County (County) Pre-Treatment Program. The analyzed samples are representative of the boiler blowdown water, which discharges to the sanitary sewer system on the property at Harmans Road in Hanover, Maryland. The boiler is a component of the groundwater remediation system (System) on the property, and the blowdown water consists of softened municipal (potable) water with an added water treatment chemical (CHEM-AQUA 16890). The discharge monitoring results are being submitted in accordance with Part 1, Section 6 of the Permit.

## GROUNDWATER REMEDIATION SYSTEM – DESCRIPTION AND OPERATIONS

EMERSUB 16 operates the System to control the migration of chlorinated volatile organic compounds (VOCs) and 1,4-dioxane present in shallow and deep zones within the Lower Patapsco aquifer underlying the property. The System involves the treatment of extracted groundwater using synthetic resin, which regularly undergoes regeneration onsite to desorb the VOCs and 1,4-dioxane removed from the groundwater. A steam boiler and steam superheater system are used to produce superheated steam for the regeneration of the resin. During normal System operation, regenerations are initiated three times per week on Monday, Wednesday, and Friday, and the boiler operates for about 20 hours during each regeneration. The blowdown primarily occurs during each regeneration event when the boiler is in operation and comprises most of the water discharged to the sewer system during a typical month of System operation.

## BOILER BLOWDOWN WATER EXCEEDANCE

WSP sampled the boiler blowdown water on November 3, 2021, measuring the pH using a calibrated field meter at the time of sample collection. The details of this sampling event were included in a letter to the County dated December 9, 2021. The measured pH of

WSP USA  
Suite 300  
13530 Dulles Technology Drive  
Herndon, VA 20171

Tel.: +1 703 709-6500  
Fax: +1 703 709-8505  
wsp.com



the blowdown water (10.76 SU) was above the range of 6-10 SU specified in the Permit. Based on correspondence with the County Pre-Treatment Program about the possibility of obtaining a variance for the upper pH limit of 10 SU in the Permit, WSP completed a small study to monitor the pH of the boiler blowdown water. Prior to initiating the pH study, WSP oversaw replacement of the automated boiler surface blowdown assembly. Installation and setup of the new conductivity-based surface blowdown assembly was completed on March 18, 2022.

## BOILER BLOWDOWN WATER PH STUDY

Between March 21 and April 8, 2022, WSP monitored the pH of the boiler blowdown water. The water was sampled during both bottom blowdowns and surface blowdowns and analyzed for pH onsite using a calibrated field meter. A bottom blowdown is a manual procedure completed by the system operator as part of the boiler checks prior to each regeneration. A surface blowdown is an automated procedure triggered by the boiler water conductivity controller that occurs as needed to lower the boiler water conductivity. Boiler water conductivity is measured by a probe hourly, and the controller initiates a brief opening of a motorized ball valve if the conductivity is above the operating set point.

The pH of the boiler blowdown water remained consistent throughout the study (10.41 SU to 11.11 SU), with a calculated average of 10.81 SU (Table 1). The consistently high values for the blowdown are in part due to the elevated pH of the municipal water that is used as the boiler feedwater. The pH of the feedwater, which typically measures in the range of 8 to 9 SU, is the result of the treatment process used prior to water being placed into the distribution system (*i.e.*, public water mains).

Based on operational information for the boiler and a conservative assumption that the boiler runs at full capacity (100% load), the calculated blowdown rate in pounds (lbs.) during a single regeneration event is 13,800 lbs. water (Enclosure A). The volume of blowdown water (“blowdown water”) discharged to the sanitary sewer during a regeneration event is estimated to be 1,655 gallons (gal) based on an assumed density of water of 8.34 lbs./gal. This estimate assumes the blowdown water volume generated during a regeneration event is approximately  $\frac{1}{3}$  of the feedwater routed to the boiler. With the addition of municipal water to cool the blowdown water prior to discharge (“cooling water”), the total blowdown water – *i.e.*, “blowdown water” + “cooling water” – is estimated to be approximately 2,000 gallons during each regeneration event. Given the current regeneration schedule, this equates to a total of approximately 6,000 gallons of total blowdown water discharged to the sanitary sewer per week.

## POST-STUDY ACTIONS

In accordance with the boiler blowdown pH study plan provided in the December 9, 2021, discharge sampling submittal, WSP shut down operation of the System and disabled the automatic blowdown of the boiler on April 29, 2022, due to the pH levels being consistently above the upper limit of 10 SU during the study period. The County was notified of the System status via electronic mail on April 29<sup>th</sup>. The System will remain temporarily shut down pending the County’s review of the pH study information provided in this submittal. In parallel with the County’s review of the study results, EMERSUB 16 and WSP plan to evaluate options for lowering the pH of the boiler blowdown so this discharge complies with the 6-10 SU range specified in the Permit.





If you have any questions or require additional information, please contact me at (703) 709-6500.

Kind regards,

A handwritten signature in black ink that reads "Robert E. Johnson". The signature is written in a cursive style.

Robert E. Johnson  
Director of Geological Sciences – Earth & Environment

K:\Emerson\Kop-Flex\\_SONSITE AREA\Wastewater Discharge Permit - County\Discharge sampling\Boiler blowdown water\2022 – 04 April

Encl.

cc: Department of Public Works, Finance Division  
Mr. Stephen Clarke, EMERSUB 16 LLC  
Ms. Amber Crouch, EMERSUB 16 LLC

## TABLE

**Table 1**

**Boiler Blowdown Water pH  
Short-Term Monitoring Study  
EMERSUB 16 LLC Treatment Building, Hanover, Maryland  
Wastewater Discharge Permit No. 210020**

<u>Sample Type</u>	<u>Date of Measurement</u>	<u>pH (SU)</u>
Surface blowdown	3/21/2022	11.11
Surface blowdown	3/21/2022	10.84
Bottom blowdown	3/23/2022	10.61
Surface blowdown	3/23/2022	10.77
Bottom blowdown	3/25/2022	10.41
Surface blowdown	3/25/2022	10.94
Bottom blowdown	3/28/2022	10.72
Surface blowdown	3/28/2022	10.92
Bottom blowdown	3/30/2022	10.78
Surface blowdown	3/30/2022	10.90
Bottom blowdown	4/1/2022	10.73
Surface blowdown	4/1/2022	10.80
Bottom blowdown	4/4/2022	11.01
Surface blowdown	4/4/2022	11.00
Bottom blowdown	4/8/2022	10.78
Surface blowdown	4/8/2022	10.67

**10.81 Average pH**

## ENCLOSURE A – CALCULATION OF BLOWDOWN RATE DURING REGENERATION EVENTS

# CHEM-AQUA BoilerCalc (US)



Version 2018.11.01

Company Name	WSP - USA
Location	7555 Harmans Rd.
System ID	40 HP Steam Boiler INFO

Date Created 5/12/2022

## Boiler System Data

Type of Boiler Rating	HP
Rated Boiler Capacity (HP)	40
Equivalent Steam (lb/hr)	1,380
Avg. % Load	100
Avg Steam Production (lb/hr)	1,380
Hours per Day Operation	20
Days per Year Operation	156
% Condensate Return	18
Operating Pressure (psig)	
FW Temperature (°F)	

## Boiler Program Summary

Daily Steam Production (lb)	27,600	Annual Steam Production (lb)	4,305,600
Daily Feedwater Flow (lb)	41,400	Annual Feedwater Flow (lb)	6,458,400
Daily Condensate Return (lb)	7,452	Annual Condensate Return (lb)	1,162,512
Daily Makeup Rate (lb)	33,948	Annual Makeup Rate (lb)	5,295,888
Daily Blowdown Rate (lb)	13,800	Annual Blowdown Rate (lb)	2,152,800
Feedwater Cycles	3.0	Daily Makeup Rate (gal)	4,071
Blowdown Rate	33.33%	Annual Makeup Rate (gal)	634,999

## Makeup Analysis (After Pretreatment)

		Theoretical Feedwater	Max FW Cycles @ 0-300 psi
Conductivity (uS/cm)	1750	1435	4.9
M-Alkalinity (ppm)	372	305.04	3.3
Chlorides (ppm)	65	53.3	
Calcium Hardness (ppm)	0.30	0.246	
Total Hardness (ppm)	0.30	0.246	833.3
Silica (ppm)	112.0	91.84	2.0

Boiler Treatment Cost (\$/Year)	\$0.00
Boiler Treatment Cost (\$/MM lb. Steam)	\$0.00
Boiler Treatment Cost (\$/MM lb FW)	\$0.00
Boiler Treatment Cost (\$/1000 gal MU)	\$0.00

Type of Cycles	FW
Target Feed Water Cycles	3.0

## Boiler Treatment Requirements

Product	Feed (ppm)	Unit Price	Price Unit	Pack Size	lb/Year	gal/Year	Cost/Year

Estimated Annual Treatment Cost \$0.00

## Miscellaneous Products

Product	ppm Boiler	Unit Price	Price Unit	Pack Size	lb/Year	gal/Year	Cost/Year

Total Misc Products Cost \$0.00

ENCLOSURE B – CERTIFIED LABORATORY ANALYTICAL REPORT FOR ONSITE  
MONITORING WELL AND RECOVERY WELL SAMPLES (JUNE 2022)



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

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

Analytical Results Report For

**WSP USA Inc.**

Project Former KOP-Flex Facility Onsit

Workorder 3250320

Report ID 181150 on 7/13/2022

### Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jun 27, 2022.

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

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

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

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

Recipient(s):

Elliott Martynkiewicz - WSP USA Inc.  
Eric Johnson - WSP USA INC

*Susan Scherer*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)

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



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3250320001	MW-41D	Ground Water	06/26/2022 14:55	06/27/2022 19:00	CBC	Collected By Client
3250320002	MW-01	Ground Water	06/26/2022 15:05	06/27/2022 19:00	CBC	Collected By Client
3250320003	MW-01D	Ground Water	06/26/2022 15:10	06/27/2022 19:00	CBC	Collected By Client
3250320004	MW-22D	Ground Water	06/26/2022 15:25	06/27/2022 19:00	CBC	Collected By Client
3250320005	MW-04	Ground Water	06/26/2022 15:40	06/27/2022 19:00	CBC	Collected By Client
3250320006	MW-20	Ground Water	06/26/2022 15:50	06/27/2022 19:00	CBC	Collected By Client
3250320007	MW-09	Ground Water	06/26/2022 16:05	06/27/2022 19:00	CBC	Collected By Client
3250320008	MW-23D	Ground Water	06/26/2022 16:15	06/27/2022 19:00	CBC	Collected By Client
3250320009	MW-46D	Ground Water	06/26/2022 16:30	06/27/2022 19:00	CBC	Collected By Client
3250320010	MW-16	Ground Water	06/26/2022 17:00	06/27/2022 19:00	CBC	Collected By Client
3250320011	MW-03	Ground Water	06/26/2022 10:45	06/27/2022 19:00	CBC	Collected By Client
3250320012	MW-27D	Ground Water	06/26/2022 11:05	06/27/2022 19:00	CBC	Collected By Client
3250320013	MW-43	Ground Water	06/26/2022 11:15	06/27/2022 19:00	CBC	Collected By Client
3250320014	MW-39	Ground Water	06/26/2022 11:30	06/27/2022 19:00	CBC	Collected By Client
3250320015	MW-18	Ground Water	06/26/2022 11:50	06/27/2022 19:00	CBC	Collected By Client
3250320016	MW-40D	Ground Water	06/26/2022 12:00	06/27/2022 19:00	CBC	Collected By Client
3250320017	MW-38R	Ground Water	06/26/2022 14:10	06/27/2022 19:00	CBC	Collected By Client
3250320018	MW-05R	Ground Water	06/26/2022 14:20	06/27/2022 19:00	CBC	Collected By Client
3250320019	MW-44	Ground Water	06/26/2022 14:35	06/27/2022 19:00	CBC	Collected By Client
3250320020	MW-21D	Ground Water	06/26/2022 14:40	06/27/2022 19:00	CBC	Collected By Client
3250320021	RW-1S	Ground Water	06/26/2022 13:15	06/27/2022 19:00	CBC	Collected By Client
3250320022	RW-2S	Ground Water	06/26/2022 13:20	06/27/2022 19:00	CBC	Collected By Client
3250320023	RW-3S	Ground Water	06/26/2022 13:25	06/27/2022 19:00	CBC	Collected By Client
3250320024	RW-1D	Ground Water	06/26/2022 13:35	06/27/2022 19:00	CBC	Collected By Client
3250320025	RW-2D	Ground Water	06/26/2022 13:40	06/27/2022 19:00	CBC	Collected By Client
3250320026	Trip Blank	Ground Water	06/26/2022 00:00	06/27/2022 19:00	CBC	Collected By Client





---

## Reference

---

### Notes

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

---

### Standard Acronyms/Flags

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

---



**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**

- |   |  |
|---|--|
| 1 | The surrogate 2-Methylnaphthalene-d10 for method SW846 8270E SIM was outside of control limits in the method blankk associated with this sample. The % Recovery was reported as 26.9 and the control limits were 29 to 112. This result was reported at a dilution of 1. |
| 2 | The Method Blank for method SW846 8270E SIM reported a value greater than the reporting level for the analyte 1,4-Dioxane. The concentration was   |
| 3 | The QC sample type MS for method SW846 8260D was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 120 and the control limits were 73 to 117.  |



### Detected Results Summary

Client Sample ID **MW-41D** Collected **06/26/2022 14:55**  
Lab Sample ID **3250320001** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	0.62	ug/L	0.10	SW846 8270E SIM	#



### Detected Results Summary

Client Sample ID	<b>MW-01</b>	Collected	<b>06/26/2022 15:05</b>
Lab Sample ID	<b>3250320002</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	0.23	ug/L	0.10	SW846 8270E SIM	#



### Detected Results Summary

Client Sample ID	MW-01D	Collected	06/26/2022 15:10
Lab Sample ID	3250320003	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	4.0	ug/L	0.10	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	1.3	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	3.1	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	19.1	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID **MW-22D** Collected **06/26/2022 15:25**  
Lab Sample ID **3250320004** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	1.6	ug/L	0.13	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1-Dichloroethene	9.0	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID	MW-04	Collected	06/26/2022 15:40
Lab Sample ID	3250320005	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	86.8	ug/L	2.0	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	1.8	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	173	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	339	ug/L	5.0	SW846 8260D	#
1,2-Dichloroethane	3.1	ug/L	1.0	SW846 8260D	#
Trichloroethene	3.0	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID	MW-20	Collected	06/26/2022 15:50
Lab Sample ID	3250320006	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	377	ug/L	40.0	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,2-Trichloroethane	2.7	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	294	ug/L	5.0	SW846 8260D	#
1,1-Dichloroethene	426	ug/L	5.0	SW846 8260D	#
1,2-Dichloroethane	10.8	ug/L	1.0	SW846 8260D	#
cis-1,2-Dichloroethene	2.9	ug/L	1.0	SW846 8260D	#
Trichloroethene	2.7	ug/L	1.0	SW846 8260D	#





### Detected Results Summary

Client Sample ID	MW-09	Collected	06/26/2022 16:05
Lab Sample ID	3250320007	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	4.5	ug/L	0.10	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1-Dichloroethane	3.0	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	57.7	ug/L	1.0	SW846 8260D	#
Chloroform	2.4	ug/L	1.0	SW846 8260D	#



**Detected Results Summary**

Client Sample ID	<b>MW-23D</b>	Collected	<b>06/26/2022 16:15</b>
Lab Sample ID	<b>3250320008</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	27.0	ug/L	0.50	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	10.7	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	34.6	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	138	ug/L	1.0	SW846 8260D	#
1,2-Dichloroethane	1.5	ug/L	1.0	SW846 8260D	#



**Detected Results Summary**

Client Sample ID	<b>MW-46D</b>	Collected	<b>06/26/2022 16:30</b>
Lab Sample ID	<b>3250320009</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	23.4	ug/L	0.25	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	5.7	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	20.7	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	92.4	ug/L	1.0	SW846 8260D	#
1,2-Dichloroethane	1.0	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID	MW-16	Collected	06/26/2022 17:00
Lab Sample ID	3250320010	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	26.4	ug/L	1.0	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	1610	ug/L	20.0	SW846 8260D	#
1,1-Dichloroethane	1030	ug/L	20.0	SW846 8260D	#
1,1-Dichloroethene	1210	ug/L	20.0	SW846 8260D	#
Acetone	86.1	ug/L	10.0	SW846 8260D	#
Chloroethane	42.6	ug/L	1.0	SW846 8260D	#
Ethylbenzene	1.4	ug/L	1.0	SW846 8260D	#
Methylene Chloride	1.4	ug/L	1.0	SW846 8260D	#
mp-Xylene	4.7	ug/L	2.0	SW846 8260D	#
o-Xylene	2.1	ug/L	1.0	SW846 8260D	#
Tetrachloroethene	5.5	ug/L	1.0	SW846 8260D	#
Total Xylenes	6.8	ug/L	3.0	SW846 8260D	#
Trichloroethene	13.8	ug/L	1.0	SW846 8260D	#
Vinyl Chloride	2.3	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID	<b>MW-27D</b>	Collected	<b>06/26/2022 11:05</b>
Lab Sample ID	<b>3250320012</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	0.13	ug/L	0.13	SW846 8270E SIM	#



### Detected Results Summary

Client Sample ID **MW-43** Collected **06/26/2022 11:15**  
Lab Sample ID **3250320013** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	7.0	ug/L	0.13	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1-Dichloroethane	2.5	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	29.4	ug/L	1.0	SW846 8260D	#
Methyl t-Butyl Ether	2.9	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID	<b>MW-39</b>	Collected	<b>06/26/2022 11:30</b>
Lab Sample ID	<b>3250320014</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	0.22	ug/L	0.14	SW846 8270E SIM	#



### Detected Results Summary

Client Sample ID **MW-40D** Collected **06/26/2022 12:00**  
Lab Sample ID **3250320016** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	0.18	ug/L	0.18	SW846 8270E SIM	#





### Detected Results Summary

Client Sample ID **MW-38R** Collected **06/26/2022 14:10**  
Lab Sample ID **3250320017** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	14.4	ug/L	0.25	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1-Dichloroethane	7.6	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID MW-05R Collected 06/26/2022 14:20  
Lab Sample ID 3250320018 Lab Receipt 06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	0.96	ug/L	0.25	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	1.2	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID **MW-44** Collected **06/26/2022 14:35**  
Lab Sample ID **3250320019** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	2.5	ug/L	0.10	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	5.9	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	2.3	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	3.2	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID **MW-21D** Collected **06/26/2022 14:40**  
Lab Sample ID **3250320020** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	4.2	ug/L	0.10	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1-Dichloroethene	24.5	ug/L	1.0	SW846 8260D	#
Methyl t-Butyl Ether	1.1	ug/L	1.0	SW846 8260D	#



**Detected Results Summary**

Client Sample ID	<b>RW-1S</b>	Collected	<b>06/26/2022 13:15</b>
Lab Sample ID	<b>3250320021</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	136	ug/L	0.10	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	75.4	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	144	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	537	ug/L	10.0	SW846 8260D	#
1,2-Dichloroethane	2.4	ug/L	1.0	SW846 8260D	#
Chloroethane	17.9	ug/L	1.0	SW846 8260D	#
cis-1,2-Dichloroethene	2.9	ug/L	1.0	SW846 8260D	#
Trichloroethene	3.7	ug/L	1.0	SW846 8260D	#
Vinyl Chloride	5.3	ug/L	1.0	SW846 8260D	#



**Detected Results Summary**

Client Sample ID	<b>RW-2S</b>	Collected	<b>06/26/2022 13:20</b>
Lab Sample ID	<b>3250320022</b>	Lab Receipt	<b>06/27/2022 19:00</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	276	ug/L	5.0	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	800	ug/L	10.0	SW846 8260D	#
1,1-Dichloroethane	133	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	726	ug/L	10.0	SW846 8260D	#
Methylene Chloride	10.3	ug/L	1.0	SW846 8260D	#
Toluene	3.2	ug/L	1.0	SW846 8260D	#
Trichloroethene	9.8	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID **RW-3S** Collected **06/26/2022 13:25**  
Lab Sample ID **3250320023** Lab Receipt **06/27/2022 19:00**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	5.9	ug/L	0.10	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	7.8	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	3.1	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	5.8	ug/L	1.0	SW846 8260D	#



### Detected Results Summary

Client Sample ID	RW-1D	Collected	06/26/2022 13:35
Lab Sample ID	3250320024	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	36.2	ug/L	1.0	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	8.3	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	59.9	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	242	ug/L	5.0	SW846 8260D	#
1,2-Dichloroethane	1.7	ug/L	1.0	SW846 8260D	#
Chloroethane	6.2	ug/L	1.0	SW846 8260D	#
cis-1,2-Dichloroethene	2.3	ug/L	1.0	SW846 8260D	#





### Detected Results Summary

Client Sample ID	RW-2D	Collected	06/26/2022 13:40
Lab Sample ID	3250320025	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
<b>SEMIVOLATILE SIM</b>					
1,4-Dioxane	39.2	ug/L	1.0	SW846 8270E SIM	#
<b>VOLATILE ORGANICS</b>					
1,1,1-Trichloroethane	5.4	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	27.1	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	125	ug/L	1.0	SW846 8260D	#
1,2-Dichloroethane	1.3	ug/L	1.0	SW846 8260D	#



## Results

Client Sample ID	MW-41D	Collected	06/26/2022 14:55
Lab Sample ID	3250320001	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.62	2	ug/L	0.10	SW846 8270E SIM	1	06/30/2022 14:30	EXD	A

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	42.4%	29 – 112	06/30/2022 14:30	I
Fluoranthene-d10	93951-69-0	76.1%	45 – 130	06/30/2022 14:30	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C



## Results

Client Sample ID	MW-41D	Collected	06/26/2022 14:55
Lab Sample ID	3250320001	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:28	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:28	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 – 133	07/02/2022 11:28	
4-Bromofluorobenzene	460-00-4	99.4%	79 – 114	07/02/2022 11:28	
Dibromofluoromethane	1868-53-7	100%	78 – 116	07/02/2022 11:28	
Toluene-d8	2037-26-5	102%	76 – 127	07/02/2022 11:28	



## Results

Client Sample ID	MW-01	Collected	06/26/2022 15:05
Lab Sample ID	3250320002	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.23	2	ug/L	0.10	SW846 8270E SIM	1	06/30/2022 15:00	EXD	A

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	44.6%	29 – 112	06/30/2022 15:00	I
Fluoranthene-d10	93951-69-0	75%	45 – 130	06/30/2022 15:00	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C



## Results

Client Sample ID	MW-01	Collected	06/26/2022 15:05
Lab Sample ID	3250320002	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 11:50	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 11:50	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101 %	62 – 133	07/02/2022 11:50	
4-Bromofluorobenzene	460-00-4	101 %	79 – 114	07/02/2022 11:50	
Dibromofluoromethane	1868-53-7	101 %	78 – 116	07/02/2022 11:50	
Toluene-d8	2037-26-5	103 %	76 – 127	07/02/2022 11:50	



## Results

Client Sample ID	MW-01D	Collected	06/26/2022 15:10
Lab Sample ID	3250320003	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	4.0	2	ug/L	0.10	SW846 8270E SIM	1	06/30/2022 15:29	EXD	A

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	42%	29 – 112	06/30/2022 15:29	I
Fluoranthene-d10	93951-69-0	67.4%	45 – 130	06/30/2022 15:29	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,1,1-Trichloroethane	1.3		ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,1-Dichloroethane	3.1		ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,1-Dichloroethene	19.1		ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C



## Results

Client Sample ID	MW-01D	Collected	06/26/2022 15:10
Lab Sample ID	3250320003	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:13	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:13	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	07/02/2022 12:13	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	07/02/2022 12:13	
Dibromofluoromethane	1868-53-7	102%	78 – 116	07/02/2022 12:13	
Toluene-d8	2037-26-5	102%	76 – 127	07/02/2022 12:13	



## Results

Client Sample ID	MW-22D	Collected	06/26/2022 15:25
Lab Sample ID	3250320004	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.6	2	ug/L	0.13	SW846 8270E SIM	1	06/30/2022 15:58	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	38.4%	29 – 112	06/30/2022 15:58	I
Fluoranthene-d10	93951-69-0	69.9%	45 – 130	06/30/2022 15:58	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,1-Dichloroethene	9.0		ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C





## Results

Client Sample ID	MW-22D	Collected	06/26/2022 15:25
Lab Sample ID	3250320004	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:35	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:35	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	07/02/2022 12:35	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	07/02/2022 12:35	
Dibromofluoromethane	1868-53-7	100%	78 – 116	07/02/2022 12:35	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 12:35	



## Results

Client Sample ID	MW-04	Collected	06/26/2022 15:40
Lab Sample ID	3250320005	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	86.8	2	ug/L	2.0	SW846 8270E SIM	4	07/05/2022 10:23	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	51.3%	29 – 112	07/05/2022 10:23	I
2-Methylnaphthalene-d10	7297-45-2	52.6%	29 – 112	06/30/2022 16:27	I
Fluoranthene-d10	93951-69-0	68.5%	45 – 130	07/05/2022 10:23	
Fluoranthene-d10	93951-69-0	65.6%	45 – 130	06/30/2022 16:27	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,1,1-Trichloroethane	1.8		ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,1-Dichloroethane	173		ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,1-Dichloroethene	339		ug/L	5.0	SW846 8260D	5	07/05/2022 16:17	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2-Dichloroethane	3.1		ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C



## Results

Client Sample ID	MW-04	Collected	06/26/2022 15:40
Lab Sample ID	3250320005	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Trichloroethene	3.0		ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 12:57	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 12:57	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/05/2022 16:17	
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	07/02/2022 12:57	
4-Bromofluorobenzene	460-00-4	110%	79 – 114	07/05/2022 16:17	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	07/02/2022 12:57	
Dibromofluoromethane	1868-53-7	108%	78 – 116	07/05/2022 16:17	
Dibromofluoromethane	1868-53-7	103%	78 – 116	07/02/2022 12:57	
Toluene-d8	2037-26-5	102%	76 – 127	07/05/2022 16:17	
Toluene-d8	2037-26-5	102%	76 – 127	07/02/2022 12:57	



## Results

Client Sample ID	MW-20	Collected	06/26/2022 15:50
Lab Sample ID	3250320006	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	377	2	ug/L	40.0	SW846 8270E SIM	400	07/06/2022 14:22	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	0*%	29 – 112	07/06/2022 14:22	I
2-Methylnaphthalene-d10	7297-45-2	44.5%	29 – 112	06/30/2022 16:56	I
Fluoranthene-d10	93951-69-0	0*%	45 – 130	07/06/2022 14:22	
Fluoranthene-d10	93951-69-0	73%	45 – 130	06/30/2022 16:56	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,1,2-Trichloroethane	2.7		ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,1-Dichloroethane	294		ug/L	5.0	SW846 8260D	5	07/05/2022 16:40	TMP	C
1,1-Dichloroethene	426		ug/L	5.0	SW846 8260D	5	07/05/2022 16:40	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2-Dichloroethane	10.8		ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C



## Results

Client Sample ID	MW-20	Collected	06/26/2022 15:50
Lab Sample ID	3250320006	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
cis-1,2-Dichloroethene	2.9		ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Trichloroethene	2.7		ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:20	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:20	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.3%	62 – 133	07/05/2022 16:40	
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	07/02/2022 13:20	
4-Bromofluorobenzene	460-00-4	109%	79 – 114	07/05/2022 16:40	
4-Bromofluorobenzene	460-00-4	99.4%	79 – 114	07/02/2022 13:20	
Dibromofluoromethane	1868-53-7	106%	78 – 116	07/05/2022 16:40	
Dibromofluoromethane	1868-53-7	105%	78 – 116	07/02/2022 13:20	
Toluene-d8	2037-26-5	102%	76 – 127	07/05/2022 16:40	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 13:20	



## Results

Client Sample ID	MW-09	Collected	06/26/2022 16:05
Lab Sample ID	3250320007	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	4.5	2	ug/L	0.10	SW846 8270E SIM	1	06/30/2022 17:25	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	40.4%	29 – 112	06/30/2022 17:25	I
Fluoranthene-d10	93951-69-0	75.2%	45 – 130	06/30/2022 17:25	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,1-Dichloroethane	3.0		ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,1-Dichloroethene	57.7		ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Chloroform	2.4		ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C



## Results

Client Sample ID	MW-09	Collected	06/26/2022 16:05
Lab Sample ID	3250320007	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 13:42	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 13:42	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	07/02/2022 13:42	
4-Bromofluorobenzene	460-00-4	99.3%	79 – 114	07/02/2022 13:42	
Dibromofluoromethane	1868-53-7	103%	78 – 116	07/02/2022 13:42	
Toluene-d8	2037-26-5	104%	76 – 127	07/02/2022 13:42	



## Results

Client Sample ID	MW-23D	Collected	06/26/2022 16:15
Lab Sample ID	3250320008	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	27.0	2	ug/L	0.50	SW846 8270E SIM	1	06/30/2022 17:54	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	51.2%	29 – 112	06/30/2022 17:54	I
Fluoranthene-d10	93951-69-0	72.4%	45 – 130	06/30/2022 17:54	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,1,1-Trichloroethane	10.7		ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,1-Dichloroethane	34.6		ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,1-Dichloroethene	138		ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2-Dichloroethane	1.5		ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C





## Results

Client Sample ID	MW-23D	Collected	06/26/2022 16:15
Lab Sample ID	3250320008	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:04	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:04	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/02/2022 14:04	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	07/02/2022 14:04	
Dibromofluoromethane	1868-53-7	102%	78 – 116	07/02/2022 14:04	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 14:04	



## Results

Client Sample ID	MW-46D	Collected	06/26/2022 16:30
Lab Sample ID	3250320009	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	23.4	2	ug/L	0.25	SW846 8270E SIM	1	06/30/2022 18:23	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	43.2%	29 – 112	06/30/2022 18:23	I
Fluoranthene-d10	93951-69-0	58.8%	45 – 130	06/30/2022 18:23	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,1,1-Trichloroethane	5.7		ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,1-Dichloroethane	20.7		ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,1-Dichloroethene	92.4		ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2-Dichloroethane	1.0		ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C



## Results

Client Sample ID	MW-46D	Collected	06/26/2022 16:30
Lab Sample ID	3250320009	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:26	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:26	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 – 133	07/02/2022 14:26	
4-Bromofluorobenzene	460-00-4	98.6%	79 – 114	07/02/2022 14:26	
Dibromofluoromethane	1868-53-7	99.6%	78 – 116	07/02/2022 14:26	
Toluene-d8	2037-26-5	101%	76 – 127	07/02/2022 14:26	



## Results

Client Sample ID	MW-16	Collected	06/26/2022 17:00
Lab Sample ID	3250320010	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	26.4	2	ug/L	1.0	SW846 8270E SIM	10	07/05/2022 11:18	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	54.2%	29 – 112	07/05/2022 11:18	I
2-Methylnaphthalene-d10	7297-45-2	44.3%	29 – 112	06/30/2022 18:52	I
Fluoranthene-d10	93951-69-0	80.7%	45 – 130	07/05/2022 11:18	
Fluoranthene-d10	93951-69-0	79.7%	45 – 130	06/30/2022 18:52	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,1,1-Trichloroethane	1610		ug/L	20.0	SW846 8260D	20	07/07/2022 03:08	PDK	D
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,1-Dichloroethane	1030		ug/L	20.0	SW846 8260D	20	07/07/2022 03:08	PDK	D
1,1-Dichloroethene	1210		ug/L	20.0	SW846 8260D	20	07/07/2022 03:08	PDK	D
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Acetone	86.1		ug/L	10.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Chloroethane	42.6		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C



## Results

Client Sample ID	MW-16	Collected	06/26/2022 17:00
Lab Sample ID	3250320010	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Ethylbenzene	1.4		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Methylene Chloride	1.4		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
mp-Xylene	4.7		ug/L	2.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
o-Xylene	2.1		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Tetrachloroethene	5.5		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Total Xylenes	6.8		ug/L	3.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Trichloroethene	13.8		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 14:49	TMP	C
Vinyl Chloride	2.3		ug/L	1.0	SW846 8260D	1	07/02/2022 14:49	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.4%	62 – 133	07/07/2022 03:08	
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	07/02/2022 14:49	
4-Bromofluorobenzene	460-00-4	97.5%	79 – 114	07/07/2022 03:08	
4-Bromofluorobenzene	460-00-4	99.7%	79 – 114	07/02/2022 14:49	
Dibromofluoromethane	1868-53-7	92.8%	78 – 116	07/07/2022 03:08	
Dibromofluoromethane	1868-53-7	100%	78 – 116	07/02/2022 14:49	
Toluene-d8	2037-26-5	95.2%	76 – 127	07/07/2022 03:08	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 14:49	



## Results

Client Sample ID	MW-03	Collected	06/26/2022 10:45
Lab Sample ID	3250320011	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.50 U	U,2	ug/L	0.50	SW846 8270E SIM	1	06/30/2022 19:21	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	37.1%	29 – 112	06/30/2022 19:21	I
Fluoranthene-d10	93951-69-0	66.2%	45 – 130	06/30/2022 19:21	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C



## Results

Client Sample ID	MW-03	Collected	06/26/2022 10:45
Lab Sample ID	3250320011	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:11	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:11	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.8%	62 – 133	07/02/2022 15:11	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	07/02/2022 15:11	
Dibromofluoromethane	1868-53-7	103%	78 – 116	07/02/2022 15:11	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 15:11	



## Results

Client Sample ID	MW-27D	Collected	06/26/2022 11:05
Lab Sample ID	3250320012	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.13	2	ug/L	0.13	SW846 8270E SIM	1	06/30/2022 19:49	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	44.3%	29 – 112	06/30/2022 19:49	I
Fluoranthene-d10	93951-69-0	74.4%	45 – 130	06/30/2022 19:49	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Bromochloromethane	1.0 U	U,3	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C





## Results

Client Sample ID	MW-27D	Collected	06/26/2022 11:05
Lab Sample ID	3250320012	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:34	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:34	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 – 133	07/02/2022 15:34	
4-Bromofluorobenzene	460-00-4	99.6%	79 – 114	07/02/2022 15:34	
Dibromofluoromethane	1868-53-7	101%	78 – 116	07/02/2022 15:34	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 15:34	



## Results

Client Sample ID	MW-43	Collected	06/26/2022 11:15
Lab Sample ID	3250320013	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	7.0	2	ug/L	0.13	SW846 8270E SIM	1	06/30/2022 20:19	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	39.8%	29 – 112	06/30/2022 20:19	I
Fluoranthene-d10	93951-69-0	68.9%	45 – 130	06/30/2022 20:19	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,1-Dichloroethane	2.5		ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,1-Dichloroethene	29.4		ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C



## Results

Client Sample ID	MW-43	Collected	06/26/2022 11:15
Lab Sample ID	3250320013	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Methyl t-Butyl Ether	2.9		ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 15:56	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 15:56	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	07/02/2022 15:56	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	07/02/2022 15:56	
Dibromofluoromethane	1868-53-7	102%	78 – 116	07/02/2022 15:56	
Toluene-d8	2037-26-5	105%	76 – 127	07/02/2022 15:56	



## Results

Client Sample ID	MW-39	Collected	06/26/2022 11:30
Lab Sample ID	3250320014	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.22	2	ug/L	0.14	SW846 8270E SIM	1	06/30/2022 20:48	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	37.2%	29 – 112	06/30/2022 20:48	I
Fluoranthene-d10	93951-69-0	73%	45 – 130	06/30/2022 20:48	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C



## Results

Client Sample ID	MW-39	Collected	06/26/2022 11:30
Lab Sample ID	3250320014	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:18	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:18	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	07/02/2022 16:18	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/02/2022 16:18	
Dibromofluoromethane	1868-53-7	100%	78 – 116	07/02/2022 16:18	
Toluene-d8	2037-26-5	105%	76 – 127	07/02/2022 16:18	



## Results

Client Sample ID	MW-18	Collected	06/26/2022 11:50
Lab Sample ID	3250320015	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.10 U	U,2	ug/L	0.10	SW846 8270E SIM	1	06/30/2022 21:17	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	35.4%	29 – 112	06/30/2022 21:17	I
Fluoranthene-d10	93951-69-0	75.5%	45 – 130	06/30/2022 21:17	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C



## Results

Client Sample ID	MW-18	Collected	06/26/2022 11:50
Lab Sample ID	3250320015	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 16:41	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 16:41	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/02/2022 16:41	
4-Bromofluorobenzene	460-00-4	99.9%	79 – 114	07/02/2022 16:41	
Dibromofluoromethane	1868-53-7	101%	78 – 116	07/02/2022 16:41	
Toluene-d8	2037-26-5	102%	76 – 127	07/02/2022 16:41	



## Results

Client Sample ID	MW-40D	Collected	06/26/2022 12:00
Lab Sample ID	3250320016	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.18	2	ug/L	0.18	SW846 8270E SIM	1	06/30/2022 21:46	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	46%	29 – 112	06/30/2022 21:46	I
Fluoranthene-d10	93951-69-0	78.1%	45 – 130	06/30/2022 21:46	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C





## Results

Client Sample ID	MW-40D	Collected	06/26/2022 12:00
Lab Sample ID	3250320016	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:03	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:03	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/02/2022 17:03	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/02/2022 17:03	
Dibromofluoromethane	1868-53-7	101%	78 – 116	07/02/2022 17:03	
Toluene-d8	2037-26-5	102%	76 – 127	07/02/2022 17:03	



## Results

Client Sample ID	MW-38R	Collected	06/26/2022 14:10
Lab Sample ID	3250320017	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	14.4	2	ug/L	0.25	SW846 8270E SIM	1	06/30/2022 22:15	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	47.2%	29 – 112	06/30/2022 22:15	I
Fluoranthene-d10	93951-69-0	82.8%	45 – 130	06/30/2022 22:15	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,1-Dichloroethane	7.6		ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C



## Results

Client Sample ID	MW-38R	Collected	06/26/2022 14:10
Lab Sample ID	3250320017	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:25	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:25	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	07/02/2022 17:25	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/02/2022 17:25	
Dibromofluoromethane	1868-53-7	103%	78 – 116	07/02/2022 17:25	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 17:25	



## Results

Client Sample ID	MW-05R	Collected	06/26/2022 14:20
Lab Sample ID	3250320018	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.96	2	ug/L	0.25	SW846 8270E SIM	1	07/01/2022 20:48	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	43%	29 – 112	07/01/2022 20:48	I
Fluoranthene-d10	93951-69-0	59.5%	45 – 130	07/01/2022 20:48	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,1,1-Trichloroethane	1.2		ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C



## Results

Client Sample ID	MW-05R	Collected	06/26/2022 14:20
Lab Sample ID	3250320018	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/02/2022 17:47	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/02/2022 17:47	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	07/02/2022 17:47	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	07/02/2022 17:47	
Dibromofluoromethane	1868-53-7	105%	78 – 116	07/02/2022 17:47	
Toluene-d8	2037-26-5	103%	76 – 127	07/02/2022 17:47	



## Results

Client Sample ID	MW-44	Collected	06/26/2022 14:35
Lab Sample ID	3250320019	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	2.5	2	ug/L	0.10	SW846 8270E SIM	1	07/01/2022 21:16	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	45%	29 – 112	07/01/2022 21:16	I
Fluoranthene-d10	93951-69-0	83.3%	45 – 130	07/01/2022 21:16	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,1,1-Trichloroethane	5.9		ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,1-Dichloroethane	2.3		ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,1-Dichloroethene	3.2		ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C



## Results

Client Sample ID	MW-44	Collected	06/26/2022 14:35
Lab Sample ID	3250320019	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:25	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:25	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/05/2022 17:25	
4-Bromofluorobenzene	460-00-4	108%	79 – 114	07/05/2022 17:25	
Dibromofluoromethane	1868-53-7	109%	78 – 116	07/05/2022 17:25	
Toluene-d8	2037-26-5	101%	76 – 127	07/05/2022 17:25	



## Results

Client Sample ID	MW-21D	Collected	06/26/2022 14:40
Lab Sample ID	3250320020	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	4.2	2	ug/L	0.10	SW846 8270E SIM	1	07/05/2022 09:54	GEC	A

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	36.5%	29 – 112	07/05/2022 09:54	I
Fluoranthene-d10	93951-69-0	79.4%	45 – 130	07/05/2022 09:54	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,1-Dichloroethene	24.5		ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C





## Results

Client Sample ID	<b>MW-21D</b>	Collected	<b>06/26/2022 14:40</b>
Lab Sample ID	<b>3250320020</b>	Lab Receipt	<b>06/27/2022 19:00</b>

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Methyl t-Butyl Ether	1.1		ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 17:48	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 17:48	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/05/2022 17:48	
4-Bromofluorobenzene	460-00-4	110%	79 – 114	07/05/2022 17:48	
Dibromofluoromethane	1868-53-7	108%	78 – 116	07/05/2022 17:48	
Toluene-d8	2037-26-5	101%	76 – 127	07/05/2022 17:48	



## Results

Client Sample ID	RW-1S	Collected	06/26/2022 13:15
Lab Sample ID	3250320021	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	136	2	ug/L	0.10	SW846 8270E SIM	1	07/01/2022 16:13	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	58.6%	29 – 112	07/01/2022 16:13	
Fluoranthene-d10	93951-69-0	85.3%	45 – 130	07/01/2022 16:13	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,1,1-Trichloroethane	75.4		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,1-Dichloroethane	144		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,1-Dichloroethene	537		ug/L	10.0	SW846 8260D	10	07/07/2022 02:23	PDK	D
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2-Dichloroethane	2.4		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Chloroethane	17.9		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C



## Results

Client Sample ID	RW-1S	Collected	06/26/2022 13:15
Lab Sample ID	3250320021	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	2.9		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Trichloroethene	3.7		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:11	TMP	C
Vinyl Chloride	5.3		ug/L	1.0	SW846 8260D	1	07/05/2022 18:11	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/05/2022 18:11	
1,2-Dichloroethane-d4	17060-07-0	92.3%	62 – 133	07/07/2022 02:23	
4-Bromofluorobenzene	460-00-4	111%	79 – 114	07/05/2022 18:11	
4-Bromofluorobenzene	460-00-4	97.5%	79 – 114	07/07/2022 02:23	
Dibromofluoromethane	1868-53-7	107%	78 – 116	07/05/2022 18:11	
Dibromofluoromethane	1868-53-7	93.5%	78 – 116	07/07/2022 02:23	
Toluene-d8	2037-26-5	103%	76 – 127	07/05/2022 18:11	
Toluene-d8	2037-26-5	95%	76 – 127	07/07/2022 02:23	



## Results

Client Sample ID	RW-2S	Collected	06/26/2022 13:20
Lab Sample ID	3250320022	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	276	2	ug/L	5.0	SW846 8270E SIM	50	07/08/2022 16:39	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	57.6%	29 – 112	07/08/2022 16:39	
2-Methylnaphthalene-d10	7297-45-2	46%	29 – 112	07/01/2022 16:41	
Fluoranthene-d10	93951-69-0	74.2%	45 – 130	07/08/2022 16:39	
Fluoranthene-d10	93951-69-0	71.5%	45 – 130	07/01/2022 16:41	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,1,1-Trichloroethane	800		ug/L	10.0	SW846 8260D	10	07/07/2022 02:46	PDK	D
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,1-Dichloroethane	133		ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,1-Dichloroethene	726		ug/L	10.0	SW846 8260D	10	07/07/2022 02:46	PDK	D
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C



## Results

Client Sample ID	RW-2S	Collected	06/26/2022 13:20
Lab Sample ID	3250320022	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Methylene Chloride	10.3		ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Toluene	3.2		ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Trichloroethene	9.8		ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:33	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:33	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.2%	62 – 133	07/07/2022 02:46	
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/05/2022 18:33	
4-Bromofluorobenzene	460-00-4	98.7%	79 – 114	07/07/2022 02:46	
4-Bromofluorobenzene	460-00-4	112%	79 – 114	07/05/2022 18:33	
Dibromofluoromethane	1868-53-7	91%	78 – 116	07/07/2022 02:46	
Dibromofluoromethane	1868-53-7	108%	78 – 116	07/05/2022 18:33	
Toluene-d8	2037-26-5	93.6%	76 – 127	07/07/2022 02:46	
Toluene-d8	2037-26-5	103%	76 – 127	07/05/2022 18:33	



## Results

Client Sample ID	RW-3S	Collected	06/26/2022 13:25
Lab Sample ID	3250320023	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	5.9	2	ug/L	0.10	SW846 8270E SIM	1	07/01/2022 17:08	GEC	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	53.7%	29 – 112	07/01/2022 17:08	
Fluoranthene-d10	93951-69-0	91.5%	45 – 130	07/01/2022 17:08	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,1,1-Trichloroethane	7.8		ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,1-Dichloroethane	3.1		ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,1-Dichloroethene	5.8		ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C



## Results

Client Sample ID	RW-3S	Collected	06/26/2022 13:25
Lab Sample ID	3250320023	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 18:56	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 18:56	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/05/2022 18:56	
4-Bromofluorobenzene	460-00-4	110%	79 – 114	07/05/2022 18:56	
Dibromofluoromethane	1868-53-7	108%	78 – 116	07/05/2022 18:56	
Toluene-d8	2037-26-5	101%	76 – 127	07/05/2022 18:56	



## Results

Client Sample ID	RW-1D	Collected	06/26/2022 13:35
Lab Sample ID	3250320024	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	36.2	2	ug/L	1.0	SW846 8270E SIM	10	07/08/2022 15:45	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	53%	29 – 112	07/08/2022 15:45	
2-Methylnaphthalene-d10	7297-45-2	70.3%	29 – 112	07/01/2022 17:36	
Fluoranthene-d10	93951-69-0	78.7%	45 – 130	07/08/2022 15:45	
Fluoranthene-d10	93951-69-0	114%	45 – 130	07/01/2022 17:36	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,1,1-Trichloroethane	8.3		ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,1-Dichloroethane	59.9		ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,1-Dichloroethene	242		ug/L	5.0	SW846 8260D	5	07/07/2022 02:01	PDK	D
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2-Dichloroethane	1.7		ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Chloroethane	6.2		ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C





## Results

Client Sample ID	RW-1D	Collected	06/26/2022 13:35
Lab Sample ID	3250320024	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
cis-1,2-Dichloroethene	2.3		ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:18	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:18	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.7%	62 – 133	07/07/2022 02:01	
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/05/2022 19:18	
4-Bromofluorobenzene	460-00-4	99.1%	79 – 114	07/07/2022 02:01	
4-Bromofluorobenzene	460-00-4	109%	79 – 114	07/05/2022 19:18	
Dibromofluoromethane	1868-53-7	93.9%	78 – 116	07/07/2022 02:01	
Dibromofluoromethane	1868-53-7	109%	78 – 116	07/05/2022 19:18	
Toluene-d8	2037-26-5	93.7%	76 – 127	07/07/2022 02:01	
Toluene-d8	2037-26-5	103%	76 – 127	07/05/2022 19:18	



## Results

Client Sample ID	RW-2D	Collected	06/26/2022 13:40
Lab Sample ID	3250320025	Lab Receipt	06/27/2022 19:00

### SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	39.2	2	ug/L	1.0	SW846 8270E SIM	10	07/08/2022 16:12	EXD	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	47.2%	29 – 112	07/08/2022 16:12	
2-Methylnaphthalene-d10	7297-45-2	51.8%	29 – 112	07/01/2022 18:03	
Fluoranthene-d10	93951-69-0	70.3%	45 – 130	07/08/2022 16:12	
Fluoranthene-d10	93951-69-0	88.4%	45 – 130	07/01/2022 18:03	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,1,1-Trichloroethane	5.4		ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,1-Dichloroethane	27.1		ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,1-Dichloroethene	125		ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2-Dichloroethane	1.3		ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C



## Results

Client Sample ID	RW-2D	Collected	06/26/2022 13:40
Lab Sample ID	3250320025	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/05/2022 19:41	TMP	C
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/05/2022 19:41	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/05/2022 19:41	
4-Bromofluorobenzene	460-00-4	110%	79 – 114	07/05/2022 19:41	
Dibromofluoromethane	1868-53-7	109%	78 – 116	07/05/2022 19:41	
Toluene-d8	2037-26-5	102%	76 – 127	07/05/2022 19:41	



## Results

Client Sample ID	Trip Blank	Collected	06/26/2022 00:00
Lab Sample ID	3250320026	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A



## Results

Client Sample ID	Trip Blank	Collected	06/26/2022 00:00
Lab Sample ID	3250320026	Lab Receipt	06/27/2022 19:00

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/07/2022 01:39	PDK	A
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/07/2022 01:39	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.2%	62 – 133	07/07/2022 01:39	
4-Bromofluorobenzene	460-00-4	95.4%	79 – 114	07/07/2022 01:39	
Dibromofluoromethane	1868-53-7	91.9%	78 – 116	07/07/2022 01:39	
Toluene-d8	2037-26-5	94.1%	76 – 127	07/07/2022 01:39	



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3250320001	MW-41D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320002	MW-01	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320003	MW-01D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320004	MW-22D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320005	MW-04	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	
3250320006	MW-20	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	
3250320007	MW-09	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320008	MW-23D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320009	MW-46D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320010	MW-16	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	
3250320011	MW-03	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320012	MW-27D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320013	MW-43	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320014	MW-39	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320015	MW-18	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320016	MW-40D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320017	MW-38R	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320018	MW-05R	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320019	MW-44	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320020	MW-21D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250320021	RW-1S	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	
3250320022	RW-2S	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	



**Project** Former KOP-Flex Facility Onsit  
**Workorder** 3250320

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3250320023	RW-3S	SW846 8270E SIM	SW846 3510C	
		SW846 8260D	N/A	
3250320024	RW-1D	SW846 8270E SIM	SW846 3510C	
		SW846 8260D	N/A	
		SW846 8260D	N/A	
3250320025	RW-2D	SW846 8270E SIM	SW846 3510C	
		SW846 8260D	N/A	
3250320026	Trip Blank	SW846 8260D	N/A	



**QUALITY CONTROL SAMPLES**

**SEMIVOLATILE SIM**

QC Batch			
QC Batch	860123	Prep Method	SW846 3510C
Date	06/29/2022 15:05	Analysis Method	SW846 8270E SIM
Tech.	AJW		

Associated Samples			
3250320001	3250320002	3250320003	3250320004
3250320005	3250320006	3250320007	3250320008
3250320009	3250320010	3250320011	3250320012
3250320013	3250320014	3250320015	3250320016
3250320017	3250320018	3250320019	3250320020

**Method Blank** 3523175 (MB) Created on 06/29/2022 13:16 For QC Batch 860123

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
1,4-Dioxane	123-91-1	BLK	0.79 ug/L	0.10	

**SURROGATES**

Compound	CAS No	Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	BLK	0.27	1	26.9* 29 - 112	
Fluoranthene-d10	93951-69-0	BLK	0.52	1	52.5 45 - 130	

**Lab Control Standard** 3523176 (LCS) Created on 06/29/2022 13:16 For QC Batch 860123

**RESULTS**

Compound	CAS No	Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,4-Dioxane	123-91-1	LCS	0.55	1	54.9	22 - 75		

**SURROGATES**

Compound	CAS No	Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	LCS	0.51	1	50.8 29 - 112	
Fluoranthene-d10	93951-69-0	LCS	0.76	1	76 45 - 130	

QC Batch			
QC Batch	860299	Prep Method	SW846 3510C
Date	06/30/2022 10:10	Analysis Method	SW846 8270E SIM
Tech.	MXL		

Associated Samples			
3250320021	3250320022	3250320023	3250320024
3250320025			

**Method Blank** 3523434 (MB) Created on 06/30/2022 06:30 For QC Batch 860299

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
1,4-Dioxane	123-91-1	BLK	0.17 ug/L	0.10	





**QUALITY CONTROL SAMPLES**

**SEMIVOLATILE SIM (cont.)**

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	BLK	0.54	1	54.4	29 - 112	
Fluoranthene-d10	93951-69-0	BLK	0.87	1	86.7	45 - 130	

**Lab Control Standard** 3523435 (LCS) Created on 06/30/2022 06:30 For QC Batch 860299

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,4-Dioxane	123-91-1	LCS	0.56		1	55.8	22 - 75		

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	LCS	0.44	1	43.8	29 - 112	
Fluoranthene-d10	93951-69-0	LCS	0.80	1	80.2	45 - 130	



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS**

QC Batch			
QC Batch	861178	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

Associated Samples			
3250320001	3250320002	3250320003	3250320004
3250320005	3250320006	3250320007	3250320008
3250320009	3250320010	3250320011	3250320012
3250320013	3250320014	3250320015	3250320016
3250320017	3250320018		

Method Blank 3524528 (MB) Created on 07/02/2022 09:01 For QC Batch 861178

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	BLK	1.0 U	ug/L	1.0	U
1,1,1-Trichloroethane	71-55-6	BLK	1.0 U	ug/L	1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	BLK	1.0 U	ug/L	1.0	U
1,1,2-Trichloroethane	79-00-5	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethane	75-34-3	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethene	75-35-4	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloropropene	563-58-6	BLK	1.0 U	ug/L	1.0	U
1,2,3-Trichlorobenzene	87-61-6	BLK	2.0 U	ug/L	2.0	U
1,2,3-Trichloropropane	96-18-4	BLK	2.0 U	ug/L	2.0	U
1,2,4-Trichlorobenzene	120-82-1	BLK	2.0 U	ug/L	2.0	U
1,2-Dibromo-3-chloropropane	96-12-8	BLK	7.0 U	ug/L	7.0	U
1,2-Dibromoethane	106-93-4	BLK	1.0 U	ug/L	1.0	U
1,2-Dichlorobenzene	95-50-1	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloroethane	107-06-2	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloropropane	78-87-5	BLK	1.0 U	ug/L	1.0	U
1,3-Dichlorobenzene	541-73-1	BLK	1.0 U	ug/L	1.0	U
1,3-Dichloropropane	142-28-9	BLK	1.0 U	ug/L	1.0	U
1,4-Dichlorobenzene	106-46-7	BLK	1.0 U	ug/L	1.0	U
2,2-Dichloropropane	594-20-7	BLK	1.0 U	ug/L	1.0	U
2-Butanone	78-93-3	BLK	10.0 U	ug/L	10.0	U
2-Hexanone	591-78-6	BLK	5.0 U	ug/L	5.0	U
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	5.0 U	ug/L	5.0	U
Acetone	67-64-1	BLK	10.0 U	ug/L	10.0	U
Benzene	71-43-2	BLK	1.0 U	ug/L	1.0	U
Bromobenzene	108-86-1	BLK	1.0 U	ug/L	1.0	U
Bromochloromethane	74-97-5	BLK	1.0 U	ug/L	1.0	U
Bromodichloromethane	75-27-4	BLK	1.0 U	ug/L	1.0	U
Bromoform	75-25-2	BLK	1.0 U	ug/L	1.0	U
Bromomethane	74-83-9	BLK	1.0 U	ug/L	1.0	U
Carbon Tetrachloride	56-23-5	BLK	1.0 U	ug/L	1.0	U
Chlorobenzene	108-90-7	BLK	1.0 U	ug/L	1.0	U
Chlorodibromomethane	124-48-1	BLK	1.0 U	ug/L	1.0	U
Chloroethane	75-00-3	BLK	1.0 U	ug/L	1.0	U
Chloroform	67-66-3	BLK	1.0 U	ug/L	1.0	U
Chloromethane	74-87-3	BLK	1.0 U	ug/L	1.0	U
cis-1,2-Dichloroethene	156-59-2	BLK	1.0 U	ug/L	1.0	U
cis-1,3-Dichloropropene	10061-01-5	BLK	1.0 U	ug/L	1.0	U



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Dibromomethane	74-95-3	BLK	1.0 U	ug/L	1.0	U
Dichlorodifluoromethane	75-71-8	BLK	1.0 U	ug/L	1.0	U
Diisopropyl ether	108-20-3	BLK	1.0 U	ug/L	1.0	U
Ethylbenzene	100-41-4	BLK	1.0 U	ug/L	1.0	U
Hexachlorobutadiene	87-68-3	BLK	5.0 U	ug/L	5.0	U
Methyl t-Butyl Ether	1634-04-4	BLK	1.0 U	ug/L	1.0	U
Methylene Chloride	75-09-2	BLK	1.0 U	ug/L	1.0	U
mp-Xylene	108383/106423	BLK	2.0 U	ug/L	2.0	U
Naphthalene	91-20-3	BLK	2.0 U	ug/L	2.0	U
o-Chlorotoluene	95-49-8	BLK	1.0 U	ug/L	1.0	U
o-Xylene	95-47-6	BLK	1.0 U	ug/L	1.0	U
p-Chlorotoluene	106-43-4	BLK	1.0 U	ug/L	1.0	U
p-Isopropyltoluene	99-87-6	BLK	1.0 U	ug/L	1.0	U
Styrene	100-42-5	BLK	1.0 U	ug/L	1.0	U
Tetrachloroethene	127-18-4	BLK	1.0 U	ug/L	1.0	U
Toluene	108-88-3	BLK	1.0 U	ug/L	1.0	U
Total Xylenes	1330-20-7	BLK	3.0 U	ug/L	3.0	U
trans-1,2-Dichloroethene	156-60-5	BLK	1.0 U	ug/L	1.0	U
trans-1,3-Dichloropropene	10061-02-6	BLK	1.0 U	ug/L	1.0	U
Trichloroethene	79-01-6	BLK	1.0 U	ug/L	1.0	U
Trichlorofluoromethane	75-69-4	BLK	1.0 U	ug/L	1.0	U
Vinyl Acetate	108-05-4	BLK	5.0 U	ug/L	5.0	U
Vinyl Chloride	75-01-4	BLK	1.0 U	ug/L	1.0	U

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	30.30	30	101	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	29.80	30	99.5	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	30.80	30	103	78 - 116	
Toluene-d8	2037-26-5	BLK	31.20	30	104	76 - 127	

**Lab Control Standard** 3524529 (LCS) Created on 07/02/2022 09:01 For QC Batch 861178

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	LCS	22		20	110	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	22.50		20	112	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	21.20		20	106	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	21.50		20	107	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	20.80		20	104	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.60		20	108	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	22.80		20	114	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	19.30		20	96.7	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	21.70		20	109	75 - 132		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,2,4-Trichlorobenzene	120-82-1	LCS	18.70		20	93.4	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	18.30		20	91.6	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	18.50		20	92.6	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	20.30		20	102	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20.90		20	104	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	20.90		20	104	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	20.80		20	104	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	21.40		20	107	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	20.70		20	104	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	22.80		20	114	64 - 129		
2-Butanone	78-93-3	LCS	108		100	108	50 - 152		
2-Hexanone	591-78-6	LCS	94		100	94	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	99.10		100	99.1	71 - 146		
Acetone	67-64-1	LCS	116		100	116	40 - 151		
Benzene	71-43-2	LCS	22		20	110	80 - 124		
Bromobenzene	108-86-1	LCS	22.10		20	111	81 - 119		
Bromochloromethane	74-97-5	LCS	22.50		20	113	73 - 117		
Bromodichloromethane	75-27-4	LCS	22.30		20	111	79 - 126		
Bromoform	75-25-2	LCS	18.90		20	94.3	70 - 123		
Bromomethane	74-83-9	LCS	20.10		20	101	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	22		20	110	62 - 132		
Chlorobenzene	108-90-7	LCS	20.90		20	104	85 - 117		
Chlorodibromomethane	124-48-1	LCS	18.40		20	91.9	77 - 122		
Chloroethane	75-00-3	LCS	22.40		20	112	51 - 142		
Chloroform	67-66-3	LCS	21.20		20	106	78 - 122		
Chloromethane	74-87-3	LCS	19.70		20	98.6	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	21.30		20	107	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	21.20		20	106	81 - 121		
Dibromomethane	74-95-3	LCS	22.60		20	113	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	20.20		20	101	17 - 166		
Diisopropyl ether	108-20-3	LCS	21		20	105	74 - 131		
Ethylbenzene	100-41-4	LCS	21.80		20	109	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	24.10		20	121	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	22		20	110	69 - 115		
Methylene Chloride	75-09-2	LCS	19.70		20	98.6	76 - 121		
mp-Xylene	108383/106423	LCS	45.20		40	113	79 - 125		
Naphthalene	91-20-3	LCS	18.10		20	90.5	56 - 134		
o-Chlorotoluene	95-49-8	LCS	20.60		20	103	78 - 126		
o-Xylene	95-47-6	LCS	21.40		20	107	79 - 124		
p-Chlorotoluene	106-43-4	LCS	20.70		20	104	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	22.30		20	111	72 - 123		
Styrene	100-42-5	LCS	19.20		20	96	79 - 123		
Tetrachloroethene	127-18-4	LCS	21.10		20	106	72 - 124		
Toluene	108-88-3	LCS	21.60		20	108	80 - 125		
Total Xylenes	1330-20-7	LCS	66.60		60	111	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	21		20	105	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	19.20		20	96.1	78 - 126		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Trichloroethene	79-01-6	LCS	21.10		20	106	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	23.10		20	116	38 - 123		
Vinyl Acetate	108-05-4	LCS	17.10		20	85.6	58 - 136		
Vinyl Chloride	75-01-4	LCS	21		20	105	27 - 138		

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	31.50	30	105	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	29.20	30	97.5	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	31	30	103	78 - 116	
Toluene-d8	2037-26-5	LCS	30	30	100	76 - 127	

**Matrix Spike** 3524534 (MS) 3250320012 For QC Batch 861178

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

**Matrix Spike Duplicate** 3524535 (MSD) 3250320012 For QC Batch 861178

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	MS	22.60	0	20	113	78 - 121		
1,1,1,2-Tetrachloroethane	630-20-6	MSD	21.90	0	20	109	78 - 121	RPD <u>3.14</u> (Max-16)	
1,1,1-Trichloroethane	71-55-6	MS	23.80	0	20	119	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	22.80	0	20	114	66 - 130	RPD <u>4.21</u> (Max-20)	
1,1,2,2-Tetrachloroethane	79-34-5	MS	21.90	0	20	110	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	21.70	0	20	109	74 - 135	RPD <u>0.98</u> (Max-16)	
1,1,2-Trichloroethane	79-00-5	MS	22.10	0	20	110	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	21.50	0	20	108	82 - 126	RPD <u>2.55</u> (Max-15)	
1,1-Dichloroethane	75-34-3	MS	22.30	0	20	112	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	21.20	0	20	106	78 - 124	RPD <u>5.35</u> (Max-15)	
1,1-Dichloroethane	75-35-4	MS	24	0	20	120	63 - 128		
1,1-Dichloroethane	75-35-4	MSD	22.50	0	20	113	63 - 128	RPD <u>6.17</u> (Max-21)	
1,1-Dichloropropene	563-58-6	MS	24.60	0	20	123	76 - 126		
1,1-Dichloropropene	563-58-6	MSD	23.40	0	20	117	76 - 126	RPD <u>5.16</u> (Max-16)	
1,2,3-Trichlorobenzene	87-61-6	MS	16.50	0	20	82.6	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	17.60	0	20	88	61 - 126	RPD <u>6.33</u> (Max-36)	
1,2,3-Trichloropropane	96-18-4	MS	22.60	0	20	113	75 - 132		
1,2,3-Trichloropropane	96-18-4	MSD	22.60	0	20	113	75 - 132	RPD <u>0.31</u> (Max-19)	
1,2,4-Trichlorobenzene	120-82-1	MS	17.20	0	20	85.8	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	17.70	0	20	88.4	67 - 123	RPD <u>2.99</u> (Max-22)	
1,2-Dibromo-3-chloropropane	96-12-8	MS	17.50	0	20	87.5	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	18	0	20	90.1	59 - 133	RPD <u>2.96</u> (Max-26)	
1,2-Dibromoethane	106-93-4	MS	19	0	20	94.8	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	18.40	0	20	92.2	80 - 124	RPD <u>2.69</u> (Max-19)	



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,2-Dichlorobenzene	95-50-1	MS	20.80	0	20	104	82 - 118		
1,2-Dichlorobenzene	95-50-1	MSD	21	0	20	105	82 - 118	RPD	<u>1.08</u> (Max-15)
1,2-Dichloroethane	107-06-2	MS	22	0	20	110	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	22.10	0	20	110	70 - 133	RPD	<u>0.09</u> (Max-19)
1,2-Dichloropropane	78-87-5	MS	22	0	20	110	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	21.30	0	20	106	81 - 127	RPD	<u>3.32</u> (Max-15)
1,3-Dichlorobenzene	541-73-1	MS	20.90	0	20	104	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	20.70	0	20	103	81 - 118	RPD	<u>0.84</u> (Max-16)
1,3-Dichloropropane	142-28-9	MS	22	0	20	110	82 - 126		
1,3-Dichloropropane	142-28-9	MSD	21.40	0	20	107	82 - 126	RPD	<u>3.03</u> (Max-15)
1,4-Dichlorobenzene	106-46-7	MS	20.90	0	20	105	81 - 116		
1,4-Dichlorobenzene	106-46-7	MSD	20.80	0	20	104	81 - 116	RPD	<u>0.41</u> (Max-15)
2,2-Dichloropropane	594-20-7	MS	20.30	0	20	101	64 - 129		
2,2-Dichloropropane	594-20-7	MSD	19	0	20	95.2	64 - 129	RPD	<u>6.35</u> (Max-18)
2-Butanone	78-93-3	MS	93.50	0	100	93.5	50 - 152		
2-Butanone	78-93-3	MSD	99.90	0	100	99.9	50 - 152	RPD	<u>6.54</u> (Max-16)
2-Hexanone	591-78-6	MS	89.10	0	100	89.1	65 - 154		
2-Hexanone	591-78-6	MSD	87.20	0	100	87.2	65 - 154	RPD	<u>2.17</u> (Max-17)
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	104	0	100	104	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	104	0	100	104	71 - 146	RPD	<u>0.01</u> (Max-16)
Acetone	67-64-1	MS	100	0	100	100	40 - 151		
Acetone	67-64-1	MSD	112	0	100	112	40 - 151	RPD	<u>11.30</u> (Max-40)
Benzene	71-43-2	MS	23.40	0	20	117	80 - 124		
Benzene	71-43-2	MSD	22.30	0	20	112	80 - 124	RPD	<u>4.82</u> (Max-26)
Bromobenzene	108-86-1	MS	22.90	0	20	115	81 - 119		
Bromobenzene	108-86-1	MSD	22.20	0	20	111	81 - 119	RPD	<u>3.09</u> (Max-17)
Bromochloromethane	74-97-5	MS	23.90	0	20	120*	73 - 117		
Bromochloromethane	74-97-5	MSD	23.30	0	20	116	73 - 117	RPD	<u>2.71</u> (Max-19)
Bromodichloromethane	75-27-4	MS	22.90	0	20	115	79 - 126		
Bromodichloromethane	75-27-4	MSD	22.50	0	20	112	79 - 126	RPD	<u>2.05</u> (Max-16)
Bromoform	75-25-2	MS	18.80	0	20	94.1	70 - 123		
Bromoform	75-25-2	MSD	18.70	0	20	93.6	70 - 123	RPD	<u>0.52</u> (Max-16)
Bromomethane	74-83-9	MS	21	0	20	105	45 - 148		
Bromomethane	74-83-9	MSD	17.30	0	20	86.7	45 - 148	RPD	<u>19.20</u> (Max-26)
Carbon Tetrachloride	56-23-5	MS	24.10	0	20	120	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	23.10	0	20	116	62 - 132	RPD	<u>3.86</u> (Max-17)
Chlorobenzene	108-90-7	MS	21.70	0	20	109	85 - 117		
Chlorobenzene	108-90-7	MSD	20.70	0	20	103	85 - 117	RPD	<u>4.91</u> (Max-15)
Chlorodibromomethane	124-48-1	MS	18.30	0	20	91.4	77 - 122		
Chlorodibromomethane	124-48-1	MSD	17.70	0	20	88.7	77 - 122	RPD	<u>2.97</u> (Max-15)
Chloroethane	75-00-3	MS	23.10	0	20	116	51 - 142		
Chloroethane	75-00-3	MSD	21	0	20	105	51 - 142	RPD	<u>9.55</u> (Max-24)
Chloroform	67-66-3	MS	22.70	0	20	113	78 - 122		
Chloroform	67-66-3	MSD	22.20	0	20	111	78 - 122	RPD	<u>2.12</u> (Max-16)
Chloromethane	74-87-3	MS	21.80	0	20	109	38 - 156		
Chloromethane	74-87-3	MSD	20.40	0	20	102	38 - 156	RPD	<u>6.64</u> (Max-27)
cis-1,2-Dichloroethene	156-59-2	MS	22.50	0	20	113	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	21.70	0	20	109	78 - 125	RPD	<u>3.61</u> (Max-21)
cis-1,3-Dichloropropene	10061-01-5	MS	21.30	0	20	107	81 - 121		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
cis-1,3-Dichloropropene	10061-01-5	MSD	20.30	0	20	101	81 - 121	RPD <u>5.16</u> (Max-16)	
Dibromomethane	74-95-3	MS	23.70	0	20	119	81 - 125		
Dibromomethane	74-95-3	MSD	22.70	0	20	114	81 - 125	RPD <u>4.14</u> (Max-16)	
Dichlorodifluoromethane	75-71-8	MS	22	0	20	110	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	20.40	0	20	102	17 - 166	RPD <u>7.55</u> (Max-24)	
Diisopropyl ether	108-20-3	MS	22.20	0	20	111	74 - 131		
Diisopropyl ether	108-20-3	MSD	21.20	0	20	106	74 - 131	RPD <u>4.59</u> (Max-15)	
Ethylbenzene	100-41-4	MS	22.70	0	20	114	80 - 124		
Ethylbenzene	100-41-4	MSD	22	0	20	110	80 - 124	RPD <u>3.38</u> (Max-19)	
Hexachlorobutadiene	87-68-3	MS	21.10	0	20	105	55 - 128		
Hexachlorobutadiene	87-68-3	MSD	18.90	0	20	94.3	55 - 128	RPD <u>11.10</u> (Max-35)	
Methyl t-Butyl Ether	1634-04-4	MS	23.50	0.42	20	115	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	23	0.42	20	113	69 - 115	RPD <u>2.22</u> (Max-20)	
Methylene Chloride	75-09-2	MS	21.50	0	20	107	76 - 121		
Methylene Chloride	75-09-2	MSD	20.50	0	20	102	76 - 121	RPD <u>4.56</u> (Max-17)	
mp-Xylene	108383/106423	MS	46.50	0	40	116	79 - 125		
mp-Xylene	108383/106423	MSD	44.60	0	40	111	79 - 125	RPD <u>4.22</u> (Max-21)	
Naphthalene	91-20-3	MS	13.40	0	20	66.8	56 - 134		
Naphthalene	91-20-3	MSD	15.30	0	20	76.5	56 - 134	RPD <u>13.60</u> (Max-40)	
o-Chlorotoluene	95-49-8	MS	21.50	0	20	107	78 - 126		
o-Chlorotoluene	95-49-8	MSD	21.30	0	20	106	78 - 126	RPD <u>0.84</u> (Max-17)	
o-Xylene	95-47-6	MS	22.20	0	20	111	79 - 124		
o-Xylene	95-47-6	MSD	21.60	0	20	108	79 - 124	RPD <u>2.53</u> (Max-19)	
p-Chlorotoluene	106-43-4	MS	21.30	0	20	107	78 - 125		
p-Chlorotoluene	106-43-4	MSD	21.10	0	20	106	78 - 125	RPD <u>0.96</u> (Max-16)	
p-Isopropyltoluene	99-87-6	MS	21.70	0	20	109	72 - 123		
p-Isopropyltoluene	99-87-6	MSD	22.10	0	20	111	72 - 123	RPD <u>1.66</u> (Max-17)	
Styrene	100-42-5	MS	20.40	0	20	102	79 - 123		
Styrene	100-42-5	MSD	19.30	0	20	96.3	79 - 123	RPD <u>5.84</u> (Max-16)	
Tetrachloroethene	127-18-4	MS	21.70	0	20	109	72 - 124		
Tetrachloroethene	127-18-4	MSD	20.80	0	20	104	72 - 124	RPD <u>4.14</u> (Max-38)	
Toluene	108-88-3	MS	22.60	0	20	113	80 - 125		
Toluene	108-88-3	MSD	21.60	0	20	108	80 - 125	RPD <u>4.36</u> (Max-20)	
Total Xylenes	1330-20-7	MS	68.70	0	60	114	79 - 125		
Total Xylenes	1330-20-7	MSD	66.20	0	60	110	79 - 125	RPD <u>3.67</u> (Max-35)	
trans-1,2-Dichloroethene	156-60-5	MS	22.30	0	20	112	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	21.20	0	20	106	71 - 122	RPD <u>5.07</u> (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	19.20	0	20	96.2	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	18.30	0	20	91.3	78 - 126	RPD <u>5.16</u> (Max-18)	
Trichloroethene	79-01-6	MS	23.20	0	20	116	77 - 124		
Trichloroethene	79-01-6	MSD	21.90	0	20	110	77 - 124	RPD <u>5.49</u> (Max-18)	
Trichlorofluoromethane	75-69-4	MS	24.70	0	20	123	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	23.50	0	20	117	38 - 123	RPD <u>4.99</u> (Max-23)	
Vinyl Acetate	108-05-4	MS	13.80	0	20	69.2	58 - 136		
Vinyl Acetate	108-05-4	MSD	14	0	20	69.8	58 - 136	RPD <u>0.91</u> (Max-17)	
Vinyl Chloride	75-01-4	MS	23	0	20	115	27 - 138		
Vinyl Chloride	75-01-4	MSD	21.50	0	20	107	27 - 138	RPD <u>6.76</u> (Max-40)	



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	31.80	30	106	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	32	30	107	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	29.40	30	98	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	30.10	30	100	79 - 114	
Dibromofluoromethane	1868-53-7	MS	31.20	30	104	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	31.50	30	105	78 - 116	
Toluene-d8	2037-26-5	MS	30	30	100	76 - 127	
Toluene-d8	2037-26-5	MSD	29.60	30	98.7	76 - 127	

**QC Batch**

QC Batch	861751	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

**Associated Samples**

3250320005	3250320006	3250320019	3250320020
3250320021	3250320022	3250320023	3250320024
3250320025			

**Method Blank**

3524933 (MB)

Created on 07/05/2022 10:48

For QC Batch 861751

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	BLK	1.0 U	ug/L	1.0	U
1,1,1-Trichloroethane	71-55-6	BLK	1.0 U	ug/L	1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	BLK	1.0 U	ug/L	1.0	U
1,1,2-Trichloroethane	79-00-5	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethane	75-34-3	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethene	75-35-4	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloropropene	563-58-6	BLK	1.0 U	ug/L	1.0	U
1,2,3-Trichlorobenzene	87-61-6	BLK	2.0 U	ug/L	2.0	U
1,2,3-Trichloropropane	96-18-4	BLK	2.0 U	ug/L	2.0	U
1,2,4-Trichlorobenzene	120-82-1	BLK	2.0 U	ug/L	2.0	U
1,2-Dibromo-3-chloropropane	96-12-8	BLK	7.0 U	ug/L	7.0	U
1,2-Dibromoethane	106-93-4	BLK	1.0 U	ug/L	1.0	U
1,2-Dichlorobenzene	95-50-1	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloroethane	107-06-2	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloropropane	78-87-5	BLK	1.0 U	ug/L	1.0	U
1,3-Dichlorobenzene	541-73-1	BLK	1.0 U	ug/L	1.0	U
1,3-Dichloropropane	142-28-9	BLK	1.0 U	ug/L	1.0	U
1,4-Dichlorobenzene	106-46-7	BLK	1.0 U	ug/L	1.0	U
2,2-Dichloropropane	594-20-7	BLK	1.0 U	ug/L	1.0	U
2-Butanone	78-93-3	BLK	10.0 U	ug/L	10.0	U
2-Hexanone	591-78-6	BLK	5.0 U	ug/L	5.0	U
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	5.0 U	ug/L	5.0	U
Acetone	67-64-1	BLK	10.0 U	ug/L	10.0	U
Benzene	71-43-2	BLK	1.0 U	ug/L	1.0	U
Bromobenzene	108-86-1	BLK	1.0 U	ug/L	1.0	U





**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Bromochloromethane	74-97-5	BLK	1.0 U	ug/L	1.0	U
Bromodichloromethane	75-27-4	BLK	1.0 U	ug/L	1.0	U
Bromoform	75-25-2	BLK	1.0 U	ug/L	1.0	U
Bromomethane	74-83-9	BLK	1.0 U	ug/L	1.0	U
Carbon Tetrachloride	56-23-5	BLK	1.0 U	ug/L	1.0	U
Chlorobenzene	108-90-7	BLK	1.0 U	ug/L	1.0	U
Chlorodibromomethane	124-48-1	BLK	1.0 U	ug/L	1.0	U
Chloroethane	75-00-3	BLK	1.0 U	ug/L	1.0	U
Chloroform	67-66-3	BLK	1.0 U	ug/L	1.0	U
Chloromethane	74-87-3	BLK	1.0 U	ug/L	1.0	U
cis-1,2-Dichloroethene	156-59-2	BLK	1.0 U	ug/L	1.0	U
cis-1,3-Dichloropropene	10061-01-5	BLK	1.0 U	ug/L	1.0	U
Dibromomethane	74-95-3	BLK	1.0 U	ug/L	1.0	U
Dichlorodifluoromethane	75-71-8	BLK	1.0 U	ug/L	1.0	U
Diisopropyl ether	108-20-3	BLK	1.0 U	ug/L	1.0	U
Ethylbenzene	100-41-4	BLK	1.0 U	ug/L	1.0	U
Hexachlorobutadiene	87-68-3	BLK	5.0 U	ug/L	5.0	U
Methyl t-Butyl Ether	1634-04-4	BLK	1.0 U	ug/L	1.0	U
Methylene Chloride	75-09-2	BLK	1.0 U	ug/L	1.0	U
mp-Xylene	108383/106423	BLK	2.0 U	ug/L	2.0	U
Naphthalene	91-20-3	BLK	2.0 U	ug/L	2.0	U
o-Chlorotoluene	95-49-8	BLK	1.0 U	ug/L	1.0	U
o-Xylene	95-47-6	BLK	1.0 U	ug/L	1.0	U
p-Chlorotoluene	106-43-4	BLK	1.0 U	ug/L	1.0	U
p-Isopropyltoluene	99-87-6	BLK	1.0 U	ug/L	1.0	U
Styrene	100-42-5	BLK	1.0 U	ug/L	1.0	U
Tetrachloroethene	127-18-4	BLK	1.0 U	ug/L	1.0	U
Toluene	108-88-3	BLK	1.0 U	ug/L	1.0	U
Total Xylenes	1330-20-7	BLK	3.0 U	ug/L	3.0	U
trans-1,2-Dichloroethene	156-60-5	BLK	1.0 U	ug/L	1.0	U
trans-1,3-Dichloropropene	10061-02-6	BLK	1.0 U	ug/L	1.0	U
Trichloroethene	79-01-6	BLK	1.0 U	ug/L	1.0	U
Trichlorofluoromethane	75-69-4	BLK	1.0 U	ug/L	1.0	U
Vinyl Acetate	108-05-4	BLK	5.0 U	ug/L	5.0	U
Vinyl Chloride	75-01-4	BLK	1.0 U	ug/L	1.0	U

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	29.50	30	98.2	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	32.70	30	109	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	31.20	30	104	78 - 116	
Toluene-d8	2037-26-5	BLK	30.60	30	102	76 - 127	



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

Lab Control Standard

3524934 (LCS)

Created on 07/05/2022 10:48

For QC Batch 861751

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	LCS	21.20		20	106	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	20.40		20	102	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	19.30		20	96.4	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20.20		20	101	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	19.20		20	96.1	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.80		20	109	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	20.80		20	104	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	19.80		20	99.2	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	19.40		20	96.9	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	21.20		20	106	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	15.90		20	79.7	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	20.90		20	104	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	19.80		20	98.8	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	19.80		20	99	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	19.60		20	98.1	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	19.30		20	96.4	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	20.20		20	101	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	19.30		20	96.5	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	22.30		20	111	64 - 129		
2-Butanone	78-93-3	LCS	102		100	102	50 - 152		
2-Hexanone	591-78-6	LCS	83.10		100	83.1	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	97		100	97	71 - 146		
Acetone	67-64-1	LCS	101		100	101	40 - 151		
Benzene	71-43-2	LCS	20.50		20	103	80 - 124		
Bromobenzene	108-86-1	LCS	20.60		20	103	81 - 119		
Bromochloromethane	74-97-5	LCS	22.10		20	111	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.60		20	103	79 - 126		
Bromoform	75-25-2	LCS	19.40		20	97	70 - 123		
Bromomethane	74-83-9	LCS	22		20	110	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	21.70		20	109	62 - 132		
Chlorobenzene	108-90-7	LCS	19.50		20	97.3	85 - 117		
Chlorodibromomethane	124-48-1	LCS	19.60		20	97.8	77 - 122		
Chloroethane	75-00-3	LCS	19.10		20	95.6	51 - 142		
Chloroform	67-66-3	LCS	20		20	100	78 - 122		
Chloromethane	74-87-3	LCS	19.40		20	97.1	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	19.80		20	98.8	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.60		20	103	81 - 121		
Dibromomethane	74-95-3	LCS	21.20		20	106	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	20.60		20	103	17 - 166		
Diisopropyl ether	108-20-3	LCS	19.60		20	97.8	74 - 131		
Ethylbenzene	100-41-4	LCS	20.10		20	100	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	21		20	105	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	21.50		20	107	69 - 115		
Methylene Chloride	75-09-2	LCS	19.20		20	96.1	76 - 121		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
mp-Xylene	108383/106423	LCS	41		40	103	79 - 125		
Naphthalene	91-20-3	LCS	19		20	94.8	56 - 134		
o-Chlorotoluene	95-49-8	LCS	19		20	95.1	78 - 126		
o-Xylene	95-47-6	LCS	20.70		20	103	79 - 124		
p-Chlorotoluene	106-43-4	LCS	19.40		20	97.2	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	20.20		20	101	72 - 123		
Styrene	100-42-5	LCS	20.50		20	103	79 - 123		
Tetrachloroethene	127-18-4	LCS	18.30		20	91.5	72 - 124		
Toluene	108-88-3	LCS	20.30		20	102	80 - 125		
Total Xylenes	1330-20-7	LCS	61.70		60	103	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.10		20	100	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21.30		20	107	78 - 126		
Trichloroethene	79-01-6	LCS	18.90		20	94.4	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	22.50		20	113	38 - 123		
Vinyl Acetate	108-05-4	LCS	18.50		20	92.4	58 - 136		
Vinyl Chloride	75-01-4	LCS	21.30		20	107	27 - 138		

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	28.80	30	96	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	32.20	30	107	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	31.40	30	105	78 - 116	
Toluene-d8	2037-26-5	LCS	29.80	30	99.4	76 - 127	

**QC Batch**

**Associated Samples**

<u>QC Batch</u>	862258	<u>Prep Method</u>	N/A
<u>Date</u>	N/A	<u>Analysis Method</u>	SW846 8260D
<u>Tech.</u>			

3250320010	3250320021	3250320022	3250320024
3250320026			

**Method Blank**

3525816 (MB)

Created on 07/06/2022 21:00

For QC Batch 862258

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	BLK	1.0	ug/L	1.0	U
1,1,1-Trichloroethane	71-55-6	BLK	1.0	ug/L	1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	BLK	1.0	ug/L	1.0	U
1,1,2-Trichloroethane	79-00-5	BLK	1.0	ug/L	1.0	U
1,1-Dichloroethane	75-34-3	BLK	1.0	ug/L	1.0	U
1,1-Dichloroethene	75-35-4	BLK	1.0	ug/L	1.0	U
1,1-Dichloropropene	563-58-6	BLK	1.0	ug/L	1.0	U
1,2,3-Trichlorobenzene	87-61-6	BLK	2.0	ug/L	2.0	U
1,2,3-Trichloropropane	96-18-4	BLK	2.0	ug/L	2.0	U



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
1,2,4-Trichlorobenzene	120-82-1	BLK	2.0 U	ug/L	2.0	U
1,2-Dibromo-3-chloropropane	96-12-8	BLK	7.0 U	ug/L	7.0	U
1,2-Dibromoethane	106-93-4	BLK	1.0 U	ug/L	1.0	U
1,2-Dichlorobenzene	95-50-1	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloroethane	107-06-2	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloropropane	78-87-5	BLK	1.0 U	ug/L	1.0	U
1,3-Dichlorobenzene	541-73-1	BLK	1.0 U	ug/L	1.0	U
1,3-Dichloropropane	142-28-9	BLK	1.0 U	ug/L	1.0	U
1,4-Dichlorobenzene	106-46-7	BLK	1.0 U	ug/L	1.0	U
2,2-Dichloropropane	594-20-7	BLK	1.0 U	ug/L	1.0	U
2-Butanone	78-93-3	BLK	10.0 U	ug/L	10.0	U
2-Hexanone	591-78-6	BLK	5.0 U	ug/L	5.0	U
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	5.0 U	ug/L	5.0	U
Acetone	67-64-1	BLK	10.0 U	ug/L	10.0	U
Benzene	71-43-2	BLK	1.0 U	ug/L	1.0	U
Bromobenzene	108-86-1	BLK	1.0 U	ug/L	1.0	U
Bromochloromethane	74-97-5	BLK	1.0 U	ug/L	1.0	U
Bromodichloromethane	75-27-4	BLK	1.0 U	ug/L	1.0	U
Bromoform	75-25-2	BLK	1.0 U	ug/L	1.0	U
Bromomethane	74-83-9	BLK	1.0 U	ug/L	1.0	U
Carbon Tetrachloride	56-23-5	BLK	1.0 U	ug/L	1.0	U
Chlorobenzene	108-90-7	BLK	1.0 U	ug/L	1.0	U
Chlorodibromomethane	124-48-1	BLK	1.0 U	ug/L	1.0	U
Chloroethane	75-00-3	BLK	1.0 U	ug/L	1.0	U
Chloroform	67-66-3	BLK	1.0 U	ug/L	1.0	U
Chloromethane	74-87-3	BLK	1.0 U	ug/L	1.0	U
cis-1,2-Dichloroethene	156-59-2	BLK	1.0 U	ug/L	1.0	U
cis-1,3-Dichloropropene	10061-01-5	BLK	1.0 U	ug/L	1.0	U
Dibromomethane	74-95-3	BLK	1.0 U	ug/L	1.0	U
Dichlorodifluoromethane	75-71-8	BLK	1.0 U	ug/L	1.0	U
Diisopropyl ether	108-20-3	BLK	1.0 U	ug/L	1.0	U
Ethylbenzene	100-41-4	BLK	1.0 U	ug/L	1.0	U
Hexachlorobutadiene	87-68-3	BLK	5.0 U	ug/L	5.0	U
Methyl t-Butyl Ether	1634-04-4	BLK	1.0 U	ug/L	1.0	U
Methylene Chloride	75-09-2	BLK	1.0 U	ug/L	1.0	U
mp-Xylene	108383/106423	BLK	2.0 U	ug/L	2.0	U
Naphthalene	91-20-3	BLK	2.0 U	ug/L	2.0	U
o-Chlorotoluene	95-49-8	BLK	1.0 U	ug/L	1.0	U
o-Xylene	95-47-6	BLK	1.0 U	ug/L	1.0	U
p-Chlorotoluene	106-43-4	BLK	1.0 U	ug/L	1.0	U
p-Isopropyltoluene	99-87-6	BLK	1.0 U	ug/L	1.0	U
Styrene	100-42-5	BLK	1.0 U	ug/L	1.0	U
Tetrachloroethene	127-18-4	BLK	1.0 U	ug/L	1.0	U
Toluene	108-88-3	BLK	1.0 U	ug/L	1.0	U
Total Xylenes	1330-20-7	BLK	3.0 U	ug/L	3.0	U
trans-1,2-Dichloroethene	156-60-5	BLK	1.0 U	ug/L	1.0	U
trans-1,3-Dichloropropene	10061-02-6	BLK	1.0 U	ug/L	1.0	U
Trichloroethene	79-01-6	BLK	1.0 U	ug/L	1.0	U



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No	Result	Units	RDL	Qualifiers
Trichlorofluoromethane	75-69-4	BLK	1.0 U ug/L	1.0	U
Vinyl Acetate	108-05-4	BLK	5.0 U ug/L	5.0	U
Vinyl Chloride	75-01-4	BLK	1.0 U ug/L	1.0	U

*SURROGATES*

Compound	CAS No	Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK 26.70	30	89.1	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK 29.30	30	97.6	79 - 114	
Dibromofluoromethane	1868-53-7	BLK 27	30	89.9	78 - 116	
Toluene-d8	2037-26-5	BLK 28.60	30	95.4	76 - 127	

**Lab Control Standard** 3525817 (LCS) Created on 07/06/2022 21:00 For QC Batch 862258

*RESULTS*

Compound	CAS No	Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	LCS 18.90		20	94.6	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS 19.20		20	95.9	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS 18.30		20	91.4	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS 19.10		20	95.4	82 - 126		
1,1-Dichloroethane	75-34-3	LCS 18.40		20	92.2	78 - 124		
1,1-Dichloroethene	75-35-4	LCS 19.20		20	95.9	63 - 128		
1,1-Dichloropropene	563-58-6	LCS 19.50		20	97.7	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS 22.20		20	111	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS 19.40		20	96.9	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS 20.60		20	103	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS 18		20	90.1	59 - 133		
1,2-Dibromoethane	106-93-4	LCS 19.40		20	96.9	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS 17.90		20	89.4	82 - 118		
1,2-Dichloroethane	107-06-2	LCS 18.10		20	90.6	70 - 133		
1,2-Dichloropropane	78-87-5	LCS 17.90		20	89.7	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS 17.80		20	89.1	81 - 118		
1,3-Dichloropropane	142-28-9	LCS 19.10		20	95.7	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS 18.30		20	91.4	81 - 116		
2,2-Dichloropropane	594-20-7	LCS 19.90		20	99.6	64 - 129		
2-Butanone	78-93-3	LCS 102		100	102	50 - 152		
2-Hexanone	591-78-6	LCS 94.20		100	94.2	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS 107		100	107	71 - 146		
Acetone	67-64-1	LCS 84.40		100	84.4	40 - 151		
Benzene	71-43-2	LCS 19.30		20	96.5	80 - 124		
Bromobenzene	108-86-1	LCS 18.50		20	92.6	81 - 119		
Bromochloromethane	74-97-5	LCS 19.10		20	95.5	73 - 117		
Bromodichloromethane	75-27-4	LCS 18.80		20	93.9	79 - 126		
Bromoform	75-25-2	LCS 18.80		20	93.9	70 - 123		
Bromomethane	74-83-9	LCS 14.10		20	70.3	45 - 148		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Carbon Tetrachloride	56-23-5	LCS	19		20	94.9	62 - 132		
Chlorobenzene	108-90-7	LCS	18.50		20	92.6	85 - 117		
Chlorodibromomethane	124-48-1	LCS	19.30		20	96.4	77 - 122		
Chloroethane	75-00-3	LCS	17.30		20	86.3	51 - 142		
Chloroform	67-66-3	LCS	18.90		20	94.6	78 - 122		
Chloromethane	74-87-3	LCS	16.60		20	82.9	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	19.30		20	96.5	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	19.30		20	96.3	81 - 121		
Dibromomethane	74-95-3	LCS	19.30		20	96.3	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	18.20		20	90.8	17 - 166		
Diisopropyl ether	108-20-3	LCS	18.20		20	90.8	74 - 131		
Ethylbenzene	100-41-4	LCS	19.40		20	97.2	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	21		20	105	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	19.10		20	95.4	69 - 115		
Methylene Chloride	75-09-2	LCS	17.50		20	87.3	76 - 121		
mp-Xylene	108383/106423	LCS	39.50		40	98.8	79 - 125		
Naphthalene	91-20-3	LCS	21.80		20	109	56 - 134		
o-Chlorotoluene	95-49-8	LCS	18.30		20	91.5	78 - 126		
o-Xylene	95-47-6	LCS	19.20		20	95.8	79 - 124		
p-Chlorotoluene	106-43-4	LCS	19		20	95	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	19.10		20	95.5	72 - 123		
Styrene	100-42-5	LCS	19.30		20	96.3	79 - 123		
Tetrachloroethene	127-18-4	LCS	18.80		20	94	72 - 124		
Toluene	108-88-3	LCS	19.90		20	99.3	80 - 125		
Total Xylenes	1330-20-7	LCS	58.70		60	97.8	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	18.30		20	91.6	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	20.30		20	101	78 - 126		
Trichloroethene	79-01-6	LCS	17.50		20	87.6	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	18.70		20	93.5	38 - 123		
Vinyl Acetate	108-05-4	LCS	17.20		20	86	58 - 136		
Vinyl Chloride	75-01-4	LCS	17.60		20	88	27 - 138		

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	28.80	30	96	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	27.70	30	92.5	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	27.90	30	93.2	78 - 116	
Toluene-d8	2037-26-5	LCS	28.40	30	94.7	76 - 127	



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3250320001	MW-41D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320002	MW-01	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320003	MW-01D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320004	MW-22D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320005	MW-04	SW846 3510C N/A N/A	860123 N/A N/A	06/29/2022 15:05 N/A N/A	AJW	SW846 8270E SIM SW846 8260D SW846 8260D	860443 861751 861178
3250320006	MW-20	SW846 3510C N/A N/A	860123 N/A N/A	06/29/2022 15:05 N/A N/A	AJW	SW846 8270E SIM SW846 8260D SW846 8260D	860443 861751 861178
3250320007	MW-09	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320008	MW-23D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320009	MW-46D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320010	MW-16	SW846 3510C N/A N/A	860123 N/A N/A	06/29/2022 15:05 N/A N/A	AJW	SW846 8270E SIM SW846 8260D SW846 8260D	860443 862258 861178
3250320011	MW-03	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320012	MW-27D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320013	MW-43	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320014	MW-39	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320015	MW-18	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320016	MW-40D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320017	MW-38R	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861178
3250320018	MW-05R	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	864099 861178
3250320019	MW-44	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	864099 861751
3250320020	MW-21D	SW846 3510C N/A	860123 N/A	06/29/2022 15:05 N/A	AJW	SW846 8270E SIM SW846 8260D	860443 861751
3250320021	RW-1S	SW846 3510C N/A N/A	860299 N/A N/A	06/30/2022 10:10 N/A N/A	MXL	SW846 8270E SIM SW846 8260D SW846 8260D	860961 861751 862258
3250320022	RW-2S	SW846 3510C SW846 3510C N/A N/A	860299 860299 N/A N/A	06/30/2022 10:10 06/30/2022 10:10 N/A N/A	MXL MXL	SW846 8270E SIM SW846 8270E SIM SW846 8260D SW846 8260D	863754 860961 862258 861751
3250320023	RW-3S	SW846 3510C N/A	860299 N/A	06/30/2022 10:10 N/A	MXL	SW846 8270E SIM SW846 8260D	860961 861751
3250320024	RW-1D	SW846 3510C SW846 3510C N/A N/A	860299 860299 N/A N/A	06/30/2022 10:10 06/30/2022 10:10 N/A N/A	MXL MXL	SW846 8270E SIM SW846 8270E SIM SW846 8260D SW846 8260D	863754 860961 862258 861751



**Project** Former KOP-Flex Facility Onsit  
**Workorder** 3250320

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3250320025	RW-2D	SW846 3510C	860299	06/30/2022 10:10	MXL	SW846 8270E SIM	863754
		SW846 3510C	860299	06/30/2022 10:10	MXL	SW846 8270E SIM	860961
		N/A	N/A	N/A		SW846 8260D	861751
3250320026	Trip Blank	N/A	N/A	N/A		SW846 8260D	862258





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

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
**ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.**

3250320



Logged By: KSB  
PM: SJB

COC #: 2  
ALS Quote #:

Client Name: WSP  
Address: 13530 Outlets Technology Dr.  
Suite 300  
Herndon VA 20171  
Contact: Eric Johnson  
Phone#: (703) 709-6500  
Project Name#: Kop Flex Office 3140545 010  
Bill To:  
Purchase Order #:   
TAT:  Normal-Standard TAT is 10-12 business days.  
 Rush-Subject to ALS approval and surcharges.  
Date Required:   
Email?  Y  N Approved?   
Temp Taken By: KSP Therm ID: 610 WO Temp (°C) 4  
Receipt info completed by:   
Cooler Custody Seals Intact  Y  N  NA Deviations?  NO  YES  
Sample Custody Seal Intact  Y  N  NA IF YES, list below:  
Received on Ice  Y  N  NA  
Coolers & Samples Intact  Y  N  NA  
Correct Containers Provided  Y  N  NA  
Sample Label/COC Agree  Y  N  NA  
Adequate Sample Volumes  Y  N  NA  
VOA only: Headspace Present  Y  N  NA  
VOA only: Trip Blank  Y  N  NA  
NJ ≤ 4 days?  Y  N  
Courier/Tracking #:   
Sample(s) for Radiation testing?  Y  N Rad Screen (uCi)   
Reportable SDWA Sample(s)?  Y  N New Source?  Y  N  
SDWA State of Origin?   
PWSID #   
PWS Contact:   
PWS Phone #:  
SDWA Sample Type Key: D=Distribution E=Entry Point  
R=Raw P=Plant C=Check S=Special A=Annual Start-up  
Sample/COC Remarks  
Contains Short Hold Testing **YES NO**  
Internal Use: If less than 48 hours - notify lab upon receipt

Container Type	VOA Amt	Container Size	Preservative	ANALYSES/METHOD REQUESTED	SDWA Sample Type (see key)	Matrix (See bottom of COC)	EPA 8260 - VOCs	EPA 8370 - 14 Organics	Enter Number of Containers Per Sample or Field Results Below.
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2
G	2	2			G				2

Comments: Elliott Martynkiewicz

Date	Time	Relinquished By / Company Name	Received By / Company Name
6/27/22	1525	<u>[Signature]</u>	<u>[Signature]</u>
6/27/22	1800	<u>[Signature]</u>	<u>[Signature]</u>

Deliverables: Standard Lvl 1  CLP-like  HSCA   
Standard Lvl 2  DOD  Landfill   
Standard Lvl 3  NJ RED  NJ GW   
Standard Lvl 4  NJ Full   
Excel Summary  Sample Disposal   
Equis  Lab   
Custom  Special   
EDDS: Format Type   
State Samples Collected In:  NY  NJ  PA  WV  FL  MD  Other

\* G=Grab, C=Composite \*\*Matrix - A=Air, D=Drinking Water, GW=Groundwater, O=Oil, LW=Liquid Waste, S=Solid/Soil/Sludge, SW=Surface Water, WP=Wipe, WW=Wastewater  
ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057



