

EMERSUB 16 LLC

2022 OFFSITE GROUNDWATER MONITORING REPORT

FORMER KOP-FLEX FACILITY SITE,
HANOVER, MARYLAND

JANUARY 12, 2024





2022 OFFSITE
GROUNDWATER
MONITORING REPORT
FORMER KOP-FLEX FACILITY
SITE, HANOVER, MARYLAND
EMERSUB 16 LLC

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1 INTRODUCTION

On behalf of EMERSUB 16 LLC, WSP USA Inc. (WSP) has prepared this Offsite Groundwater Monitoring Report for activities performed in 2022 to assess the water quality conditions with respect to the groundwater plume emanating from the Former Kop-Flex Facility Site (Site) located at 7555 Harmans Road in Hanover, Maryland (Figure 1). The Site is identified as MD0286 under the Brownfield Master Inventory system used by the Maryland Department of the Environment (MDE) Land Restoration Program. This report pertains to the MDE-approved response action activities that are being conducted to address the groundwater impacts in the offsite area of the Site, which includes non-residential (light industrial) facilities bordering the former Kop-Flex facility to the north (Verizon Communications), and south and east (Williams Scotsman, Inc.) along with residential communities and commercial businesses to the south of Maryland Route 100.

Previous environmental investigations initiated in 1996 identified soil and groundwater impacts associated with historical releases of chlorinated solvents at the Site. The results of investigations conducted in offsite areas beginning in 2012 also showed that volatile organic compounds (VOCs) and 1,4-dioxane contained in solvents used in industrial operations have migrated to the south and southeast within the deep zone of the Lower Patapsco aquifer underlying the former facility. Since that time, an offsite groundwater monitoring plan has been developed in conjunction with the implementation of an onsite hydraulic containment system in 2017. The objectives of the ongoing monitoring program are to evaluate the trends in concentrations of site-related constituents of concern (COCs) in the aquifer system downgradient of the former Kop-Flex facility and assess whether additional actions are warranted to protect the drinking water source used by some residential communities in the area.

This 2022 Offsite Groundwater Monitoring Report consists of the following sections:

- Section 2 – Site Description and Background
- Section 3 – Environmental Setting and Hydrogeology
- Section 4 – Groundwater Monitoring Plan Sampling Procedures
- Section 5 – 2022 Sampling Results
- Section 6 – Summary and Conclusions, including planned 2023 monitoring activities.

2 SITE DESCRIPTION

The Site is located at 7555 Harmans Road in Hanover, Anne Arundel County, Maryland. The Site occupies a total area of approximately 25 acres and contains three buildings - two buildings used as office and warehouse/operations space by the current owner/operator – Catalent Cell and Gene Therapy - and a small groundwater treatment facility operated by WSP in the west-central portion of the property (Figure 1). These buildings were constructed during re-development of the property in 2016. The property is bordered to the north, east and south by light industrial operations and to the west by undeveloped land along Stony Run (a tributary of the Patapsco River), a small residential development and Harmans Road.

The former facility was constructed on previously undeveloped land in 1969 by Koppers Company, Inc., a predecessor in real estate interest of Kop-Flex, Inc. Emerson Electric Co. (Emerson) acquired Kop-Flex in 1996 and continued manufacturing activities until facility operations ceased in late 2012. In December 2014, Emerson transferred the property to its wholly owned subsidiary EMERSUB 16 LLC, which subsequently sold the property. The property is currently owned and operated by Catalent Harmans Road, LLC (Catalent).

During 2016 and early 2017, the property was redeveloped for commercial use, with the construction of two new buildings separated by a truck loading area (Figure 1). At present, Catalent is making modifications to the interior of the South Building for future business operations.

Much of the broader neighborhood in which the Site is located is primarily characterized by residential developments (single-family homes and townhouses) and undeveloped land (Figure 2). A small number of areas, primarily to the north and east, are subject to commercial and light industrial/industrial park uses. The following table summarizes the nearby land uses.

Direction	Operator Name	Address	Property Use
North	Verizon	7545 Harmans Road	Maintenance Facility
South	William Scotsman, beyond which is Maryland State Route 100	7539 Harmans Road	Mobile Trailer Distributor – Trailer Storage
East	William Scotsman, beyond which are railroad tracks	7539 Harmans Road	Mobile Trailer Distributor – Office/Fabrication Building and Trailer Storage
West	Stony Run with surrounding undeveloped land and Harmans Preserve	-----	Open space and residences

3 ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY AND SURFACE DRAINAGE

Anne Arundel County is located within the Atlantic Coastal Plain Physiographic Province. The Hanover-Severn area is situated approximately 5 miles from the Fall Line, which marks the boundary at the ground surface between the unconsolidated deposits of the Coastal Plain and the igneous and metamorphic crystalline rocks of the Piedmont Physiographic Province. Based on the United States Geological Survey (USGS) topographic 7.5-minute series quadrangle map for Relay, Maryland (revised 1974), the Site lies within an area of rolling to hilly terrain dissected by numerous perennial to intermittent streams. Overall, the highest elevations (greater than 200 feet above mean sea level [MSL]) occur in the Hanover-Severn area south and west of the former Kop-Flex facility with the lowest area (approximately 90 feet above MSL) present to the north along Stony Run.

According to the USGS topographic map, the closest stream is Stony Run, which flows across the northwestern portion of the property. Streamflow associated with the Stony Run drainage system progresses northward and eventually discharges into the Patapsco River. Additionally, numerous small, predominately man-made pond areas have been identified and mapped in the vicinity of Stony Run and its tributaries in the Hanover-Severn area. The largest of these is a hydrologically isolated pond located approximately 0.3 mile south of the site in the Harmans Woods community.

3.2 LOCAL GEOLOGIC AND HYDROGEOLOGIC SETTING

Evaluation of the borehole lithologic data within the context of the regional stratigraphic framework indicates the unconsolidated deposits in the Hanover-Severn area include units of the Lower Cretaceous Potomac Group. The most detailed lithologic information is provided by the logging of cores obtained from boreholes drilled by WSP for the onsite and offsite monitoring wells. Construction details for the offsite wells are provided in Table 1. Based on the borehole data, the following discussion provides an overview of the geologic conditions in the onsite and offsite areas.

The youngest deposits at the Site are a combination of Quaternary alluvial sediments associated with the depositional processes along Stony Run and fill materials associated with historical Site development. Based on the boring logs, the maximum thickness of these deposits in this area is approximately 20 feet as shown on the geologic cross section in Figure 3.

Lower Cretaceous litho-stratigraphic units underlie the Quaternary-age deposits down to an elevation of greater than -300 feet mean sea level (MSL). The primary Cretaceous-age litho-stratigraphic units and their corresponding hydro-stratigraphic equivalents beneath the former Kop-Flex facility and offsite area, from youngest (shallowest) to oldest (deepest), include the following (Figure 3):

- Patapsco Formation (Upper Patapsco aquifer, Lower Patapsco confining unit and Lower Patapsco aquifer)
- Arundel Clay (Arundel Clay confining unit)
- Patuxent Formation (Patuxent aquifer)

Specific information on the Lower Patapsco and Patuxent aquifers and Arundel Clay confining unit, along with general information regarding the transport of dissolved contaminants within the aquifer system, is provided in the conceptual hydrogeologic model discussed in the following section.

3.3 CONCEPTUAL HYDROGEOLOGIC MODEL

3.3.1 UPPER PATAPSCO AQUIFER

The Upper Patapsco aquifer is the shallowest hydrogeologic unit within the Hanover-Severn, Maryland area. Based on the hydrogeologic cross-section, the outcrop area¹ for this aquifer extends from the vicinity of Telegraph Road (Maryland Route 170) south and east toward Clark Station Road and WB&A Road. The Upper Patapsco is not present at the former Kop-Flex Facility Site but effectively starts 0.8 miles to the southeast of the Site. The aquifer is comprised of mostly fine to medium-grained sands, which are interbedded with clay deposits and is underlain by clayey deposits that serve as the confining unit for the Lower Patapsco aquifer.

Given the shallow depth of the Upper Patapsco aquifer in the area of interest, groundwater is presumed to occur under an unconfined condition where the top of the aquifer coincides with the water table. Detailed information on the aquifer depth is limited due to a lack of data from shallow wells installed in the residential areas east of Telegraph Road. Based on the lithologic log for monitoring well MW-34D located a short distance east of Telegraph Road, the Upper Patapsco aquifer in this area occurs to a depth of approximately 45 feet (Figure 3).

Constituents released at the Former Kop-Flex Facility Site would not be present in the Upper Patapsco aquifer. Groundwater present in the Upper Patapsco Aquifer derives from the infiltration of precipitation over the outcrop area, which is south and east of Telegraph Road (Figure 2). The upward movement of groundwater from the underlying Lower Patapsco aquifer is not a contributing source of water to this hydrogeologic unit.

3.3.2 LOWER PATAPSCO AQUIFER

The Lower Patapsco aquifer occurs over the entire area of interest, which extends south and east from the Site to the residential communities beyond the portion of Telegraph Road south of Reece Road. The aquifer ranges in thickness from approximately 170 feet at the southern boundary of the Site to approximately 320 feet in the residential areas south of Reece Road (Figure 3). Overall, the aquifer in the area consists of a layered sequence of alternating sandy and clayey sediments with the layers dipping to the south and east.² The predominately sand units are comprised of fine to coarse-grained sands with discontinuous lenses of fine-grained (silt and clay) sediments. These sandy zones are inter-layered with two, regionally extensive units of predominately dense clay deposits of varying thickness.

A shallow sand layer occurs to depths ranging from 40-60 feet below ground surface (bgs) on and around the Site to 70-75 feet bgs in the Harmans Woods community to the south. Another shallow sand unit is present over a similar depth interval in the vicinity of Reece Road and to the south in the Andorick Acres community. In addition to these shallow sand units, a deep sand layer extends over the entire area. The depth to the top of this deep sand unit varies from 80-90 feet bgs on the southern portion of the Site to greater than approximately 200 feet bgs in the Andorick Acres community. The thickness of this unit is approximately 90 feet in the northern portion of the area of interest and 160 feet further south. Fine-grained sediments comprising a regionally extensive clayey layer separates the shallow and deep sand units and serves as a low permeability, leaky confining unit for the deep sand zone. This confining unit would act as a low permeability barrier limiting the movement of groundwater and dissolved COCs between the shallow and deep sand zones.

¹ An outcrop area comprises an area of land where the unconsolidated sediments comprising a geologic unit occur at or very close to the ground surface.

² In geologic terminology, dip refers to the 'tilting' of a bed or series of layered beds from a horizontal orientation. This tilting, or inclination, of the bed(s) typically results in the depth to a given bed increasing in the direction of dip.

At the Site, groundwater in the shallow zone of the Lower Patapsco aquifer occurs under an unconfined condition, although semi-confined conditions may exist in areas where fine-grained clayey deposits are present in the shallow subsurface.³ Evaluation of the water level data from the shallow onsite and offsite monitoring wells indicates the general direction of groundwater flow, is to the north and west within the shallow sand zone in the area (Figure 4). The direction of shallow groundwater movement generally mimics the overall local surface topography described above, with groundwater providing a source of water (*i.e.*, baseflow) to local streams, and wetland areas and surface water bodies near stream courses.

Groundwater occurs under leaky confined conditions in the deep sand zone of the Lower Patapsco aquifer at the Site.⁴ Evaluation of the water level data from monitoring wells screened in this deep sand zone indicates generally south-southeast flow paths for groundwater moving through this portion of the Lower Patapsco aquifer (Figure 3).⁵ (Further discussion of the groundwater flow system within the deep portion of the Lower Patapsco aquifer is provided in Section 5.2 of this report.) In addition, for the onsite area and offsite Harmans Woods community immediately south of Route 100, the water level elevations in monitoring wells screened in the shallow zone of the Lower Patapsco aquifer are higher than elevations in the deep monitoring wells (Figure 3). This difference in the water levels between the shallow and deep monitoring wells indicates the existence of hydrologic conditions that can result in the downward movement of groundwater, and associated dissolved constituents, from the shallow sand zone to the deep sand zone of the Lower Patapsco aquifer. The downward flow of groundwater would be controlled and limited by the low permeability clayey deposits that constitute the confining unit that separates the sand zones. The water level data do not indicate conditions that would result in the upward flow of groundwater and dissolved constituents from the deep sand zone to the overlying shallow zone.

In summary, the Lower Patapsco aquifer at the Site consists of shallow (unconfined to semi-confined) and deep (leaky confined) sand units that serve as conduits for groundwater flow and associated transport of dissolved constituents. Groundwater in the shallow sand zone generally flows from the residential areas south of Maryland Route 100 (*e.g.*, the Harmans Woods community) to the north and west toward the former Kop-Flex facility and Stony Run, while groundwater in the deep sand zone flows in a south-southeastward direction. Hydrologic conditions cause groundwater and dissolved constituents to move vertically downward from the shallow to deep zones of the aquifer in the area. Dissolved volatile organic constituents that reached the deep sand zone underlying the former Kop-Flex facility would continue to migrate with water moving to the south-southeast through the sandy deposits in the deep portion of the Lower Patapsco aquifer. The presence of aquitards separating the deep and shallow zones of the Lower Patapsco aquifer would also obviate the potential for volatile constituents to migrate upward with the soil vapor to the ground surface in the downgradient, offsite area. Moreover, the presence of a clay aquitard below the deep zone of the Lower Patapsco aquifer prevents constituents from migrating to the Patuxent aquifer, which underlies the Lower Patapsco aquifer.

3.3.3 ARUNDEL CLAY

The Arundel Clay underlies the Lower Patapsco aquifer and separates it from the Patuxent Aquifer (Figure 3). This unit consists predominately of hard, dense clay that ranges in color from gray to dark gray and red to very dark brown, with rare thin beds of well-graded sand. Organic (plant) matter is present throughout much of the clayey deposits comprising this litho-stratigraphic unit in the offsite area. Given the southeastward dipping, or tilting, of the geologic units in northern Anne Arundel County, the depth to the top of the Arundel Clay increases in a south and east direction from the former Kop-Flex property. Depths to the upper boundary of this unit vary from 160 feet bgs at the southern Site boundary to 210 feet bgs at

³ A semi-confined aquifer is an aquifer that is partially overlain, or confined, by a layer(s) of low permeability material through which groundwater movement may occur.

⁴ A leaky aquifer is an aquifer whose upper and lower boundaries consist of continuous low permeability materials through which groundwater movement may occur.

⁵ In this report, when a reference is made to a deep monitoring well, it means that it is either screened in the deep confined portion of the Lower Patapsco aquifer, or in the Patuxent aquifer (described in Section 3.3.4).

the MW-36 well location in the Harmans Woods community to approximately 370 feet bgs in the central portion of the Andorick Acres community (Figure 3). Based on the lithologic logs for offsite wells that were advanced through the Arundel Clay and into the underlying Patuxent Aquifer, the thickness for this unit ranges from approximately 40 feet to 120 feet over the Hanover-Severn area. The lithologic data indicates the Arundel Clay attains its maximum thickness in the northern portion of the area of interest – Site and Harmans Woods community – and decreases to less than 70 feet further south in the Andorick Acres neighborhood. The low permeability of the predominately clayey deposits indicates the Arundel Clay serves as a regionally extensive confining unit for the underlying Patuxent aquifer within the Coastal Plain aquifer system. Given the fact this thick aquitard between the deep zone of the Lower Patapsco Aquifer and the Patuxent Aquifer has a very low permeability, site-related contaminants that have migrated to the area to the south of the facility property are confined to the deep zone of the Lower Patapsco Aquifer.

3.3.4 PATUXENT AQUIFER

The Patuxent aquifer is the deepest aquifer encountered in the Hanover-Severn area and comprises the porous sand deposits of the Patuxent Formation beneath the Arundel Clay. Detailed information on the lithologic characteristics of this hydrostratigraphic unit is minimal in the area of interest due to the limited advancement of well boreholes into this aquifer.⁶ Using the available borehole data, the depth to the top of the aquifer ranges from approximately 350 feet bgs in the Harmans Woods community (MW-36D location) to approximately 410 feet bgs in the Andorick Acres neighborhood. The aquifer depth is supported by the construction details for the residential well at 1409 Bittersweet Drive in the Andorick Acres community, which is completed at a depth of 465 feet bgs or approximately 50 feet below the aquifer's upper boundary. Based on regional hydrogeologic studies, the Patuxent aquifer is believed to approach a thickness of approximately 250 feet in northwestern Anne Arundel County.

Groundwater flow within the Patuxent aquifer occurs under leaky confined conditions, with the Arundel Clay comprising the confining unit. Evaluation of historical water level data collected from observation wells in northern Anne Arundel County indicated a generally eastward flow of groundwater within the Patuxent aquifer in the Hanover-Severn area. This flow direction, which differs from that determined for the deep sand zone of the overlying Lower Patapsco aquifer, is the result of withdrawals at a public water supply wellfield located along Dorsey Road to the east of the Site. Significant groundwater withdrawals from the Dorsey Road wellfield started in the 1960's and have continued through 2022. Based on water supply studies conducted by the Maryland Geological Survey for the Anne Arundel County Department of Public Works, there have been no major changes to the average pumping from the Patuxent aquifer at this well field. Potentiometric levels determined from depth to water measurements at the two offsite monitoring wells – MW-30D-413 and MW-36D – are consistent with the eastward flow paths ascertained from the previous investigations. The data from these wells further suggests that the Arundel Clay is serving as a competent aquitard, or hydraulic barrier, between the groundwater flow in the Lower Patapsco and Patuxent aquifers. Given the geology and direction of groundwater flow, dissolved constituents (including potentially VOCs) detected in the Patuxent aquifer are most likely derived from source areas to the west of the Severn, Maryland area and not via downward migration from the Lower Patapsco aquifer through the Arundel Clay confining unit or aquitard.

⁶ Prior to the 2018 well installation activities, no monitoring wells had been completed in the Patuxent aquifer as part of the offsite groundwater investigation activities. The deeper well at the MW-30D location, as well as MW-36D were installed beneath the Arundel Clay to provide more hydrogeologic and geochemical information for this aquifer in the area of interest.

4 GROUNDWATER MONITORING PLAN AND FIELD PROCEDURES

4.1 OVERVIEW OF GROUNDWATER SAMPLING ACTIVITIES

The locations of the offsite monitoring wells are shown in Figure 5. Offsite groundwater monitoring activities were conducted during the second and fourth quarters of 2022. The monitoring activities completed during these quarters involved the collection of groundwater quality samples from all offsite monitoring wells screened in the deep zone of the Lower Patapsco and Patuxent aquifers. Shallow well MW-45, which is screened in the shallow zone of the Lower Patapsco, is typically sampled annually but was sampled during both events in 2022. Water level measurements were collected from all sampled wells. No groundwater monitoring activities were conducted during the first or third quarters of 2022. All activities were performed following WSP's standard operating procedures (SOP's) and the September 2015 Groundwater Monitoring Plan approved by MDE and the U.S. Environmental Protection Agency (EPA). Additional information regarding the semi-annual 2022 monitoring activities is provided below.

4.2 WATER LEVEL MEASUREMENTS

The water level was measured at each offsite deep monitoring well using an electronic water level indicator to determine the hydraulic head within the portion of the aquifer system screened by the well. In addition, the total well depth was checked at the same time to identify potential siltation problems inside the well casing. All field measurements were recorded in a bound field notebook. Historical water level measurements for the offsite monitoring wells, including data from the 2022 gauging events, are included in Table 2.

4.3 HYDRASLEEVE SAMPLING

The HydraSleeve™ sampler was used to collect groundwater samples from the offsite monitoring wells in 2022. The HydraSleeve™ is a passive/no-purge sampling device capable of collecting representative groundwater samples for analysis of a range of dissolved groundwater constituents, including VOCs and 1,4-dioxane. The samplers were installed in the wells by attaching the 2.5-foot (30-inch) long HydraSleeve™ to a weighted, nylon suspension tether and setting the sampler at the pre-determined depth within the screened interval. The depth intervals for deployment of the HydraSleeve™ samplers in the offsite wells are provided in Table 3. The suspension line was secured at the wellhead to ensure the sampler remained at the designated depth during the stabilization period, which corresponded to the time between sampling events. The groundwater sample was collected by continuously pulling upward on the suspension line until the HydraSleeve™ was full. The HydraSleeve™ was removed from the well, and the water immediately transferred to the appropriate sample containers to minimize any diffusive loss of VOCs through the polyethylene wall of the sampler.

After obtaining the requisite sample volume for chemical analysis, a representative amount of the remaining water was analyzed in the field for hydrogeochemical parameters using a water quality meter. Field hydrogeochemical parameter measurements were not made in June 2022 because the size of the sampler deployed for that sampling event did not yield sufficient volume. In November 2022, field parameter measurements were collected for the groundwater samples from all wells except MW-24D, MW-25D-130, and MW-25D-192. The inability to obtain field hydrogeochemical parameter data from these three wells was again due to low sample recovery volumes. When sufficient sample volume was available, the

water was placed into the sample cup of a Horiba U-52 multi-parameter field meter for measurement of the following hydrogeochemical parameters:

- Temperature
- pH
- Specific conductivity
- Turbidity

The field parameter measurements for each sample were documented in a field notebook. Following sample collection, a new HydraSleeve™ sampler was deployed in the well for the next sampling event.

Table 4 includes the field parameter measurements for the 2022 sampling events.

4.4 ANALYTICAL METHODS

All groundwater samples were analyzed by the ALS Global (ALS) environmental laboratory in Middletown, Pennsylvania, for VOCs using U.S. EPA SW-846 Test Method 8260D. In addition, the samples were analyzed for 1,4-dioxane using U.S. EPA Method 8270E with selected ion monitoring (SIM). These test methods were also used for field quality control (QC) samples – i.e., trip blanks and duplicate samples.

5 2022 GROUNDWATER MONITORING RESULTS

5.1 GROUNDWATER QUALITY STANDARDS FOR SITE-RELATED VOCS

The current (October 2018) MDE groundwater quality standards represent the comparative criteria for all known site-related COCs detected in the offsite groundwater, excluding 1,4-dioxane. The applicable water quality standards are provided below.

- 1,1,1-Trichloroethane (TCA) – 200 micrograms per liter ($\mu\text{g/l}$)
- 1,1-Dichloroethene (DCE) – 7 $\mu\text{g/l}$
- 1,1-Dichloroethane (DCA) – 2.8 $\mu\text{g/l}$
- *cis*-1,2-DCE – 70 $\mu\text{g/l}$
- Trichloroethene (TCE) – 5 $\mu\text{g/l}$

These values correspond to the standards for Type I and II unconfined and confined aquifers and, with the exception of 1,1-DCA, are consistent with the maximum contaminant levels (MCLs) and secondary MCLs developed by the U.S. EPA under the Safe Drinking Water Act. It is worth noting that the MDE groundwater quality standard for 1,1-DCA is more stringent than the Federal MCL. Based on the site hydrogeologic and hydrogeochemical data, the Lower Patapsco aquifer and Patuxent aquifer meet the definition of a Type I aquifer provided in the MDE document *Cleanup Standards for Soil and Groundwater, Interim Final Guidance (Update No. 3)*.

At present, no groundwater quality standard has been promulgated by MDE or U.S. EPA for 1,4-dioxane. Using the current default exposure factors developed by U.S. EPA and a target cancer risk of 1×10^{-5} , MDE has calculated a risk-based groundwater criterion for 1,4-dioxane of 4.6 $\mu\text{g/l}$ with respect to the plume emanating from the Site. WSP has used the risk-based level for 1,4-dioxane to evaluate the extent of impacted groundwater for the offsite area.

The following sections discuss the analytical results for each sampling event, with the primary focus on the site-related COCs listed above. The historical analytical results for all offsite monitoring wells through the 2022 sampling events are summarized in Table 5. The results for groundwater samples collected from the deep monitoring wells in 2022 are shown on Figure 6. Certified laboratory reports provided by the laboratory for each sampling event are included in Appendix A.

5.2 RESULTS OF SEMI-ANNUAL SAMPLING EVENTS

5.2.1 JUNE 2022

All monitoring wells screened in the deep zone of the Lower Patapsco aquifer and the Patuxent aquifer were sampled during this monitoring round, as well as MW-45 located east of the Site, which is screened in the shallow zone of the Lower Patapsco.

A potentiometric surface contour map for the deep zone of the Lower Patapsco aquifer is provided in Figure 7 using the water level data obtained from the onsite and offsite well locations in June 2022. The hydraulic containment system was

shut down for system upgrades and maintenance from late April through early August 2022. Thus, the water level data provided in Figure 7 reflect the hydraulic heads under non-remedial pumping conditions. The potentiometric surface contours show that the south-southeast groundwater flow direction in the deep zone of the Lower Patapsco aquifer differs from the flow direction in the shallow zone of the aquifer, which is to the north and west toward Stony Run. The south-southeast flow direction is consistent with contour maps generated from data collected during previous well gauging events. As discussed in Section 3.2.3, dissolved constituents (*e.g.*, VOCs) will migrate downward from the shallow to deep zones of the Lower Patuxent aquifer and with groundwater flowing through the sandy deposits comprising the deep zone to the south-southeast of the former facility property.

No COCs were detected in the sample from shallow zone well MW-45. This finding is consistent with information discussed above, regarding groundwater flow direction and the unlikelihood of COCs migrating offsite to the east in the shallow zone of the Lower Patapsco aquifer.

Overall, the analytical data indicated the presence of site-related constituents just over 1 mile hydraulically downgradient (south-southeast) of the former Kop-Flex property in the deep zone of the Lower Patapsco Aquifer. Site-related COCs were also detected in the sample obtained from deep well MW-46D on the Verizon property, which is located to the north of the Site. The presence of detectable COC levels at this well location is related to the close proximity of the Verizon property to the Site. The total COC concentration in the sample from this well (142.2 µg/l) was less than the November 2021 sample (191.6 µg/l) largely due to a noticeably lower 1,4-dioxane level. The concentrations of 1,1-DCE, 1,1-DCA, and 1,4-dioxane exceeded their respective comparative groundwater quality criteria in the MW-46D sample (Table 5 and Figure 6).

In the offsite area to the immediate south, the sample from monitoring well MW-24D on the adjoining Williams-Scotsman property had the highest concentration of site-related COCs (1,843 µg/l; Table 5). This total COC concentration was slightly lower than the November 2021 result, mostly due to a decrease in the concentration of 1,4-dioxane from 475 µg/l to 165 µg/l, while the remaining individual COC concentrations (*e.g.*, 1,1-DCE, 1,1,1-TCA) increased. The concentration of TCE, which has generally been non-detect or at trace levels below the comparative criterion (5 µg/l), increased to 8.6 µg/l in June 2022 sample. The only other offsite well where this compound was historically observed was MW-25-D-192, located downgradient of MW-24D; however, these detections occurred early in the sampling history, prior to system startup in 2017. The recent detection of this compound in well MW-24D is believed to be related to migration of VOCs in response to long-term groundwater withdrawals from the onsite recovery wells.

Further downgradient, a total concentration of site-related COCs of 90.4 µg/l was detected in the MW-25D-130 sample, which is greater than the concentrations in the sample from the deeper well MW-25D-192 at this location (62.4 µg/l). The results for MW-25D-192 showed a slight increase in COC concentrations compared to the November 2021 result; however, the general trend in this well since 2018 has been decreasing. The concentrations of 1,1-DCE, 1,1-DCA, and 1,4-dioxane in these two wells were all above their respective comparative groundwater quality criteria.

The majority of the sampling data for the deep, confined Lower Patapsco monitoring wells located further downgradient indicated non-detect to low concentrations of site-related COCs, with detected levels consistent with the 2021 sample results (Figure 6 and Table 5). The highest concentrations were in the sample from the well screened from 263-273 ft bgs at the MW-30D location. The groundwater sample from this well (MW-30D-273) had concentrations of 1,1-DCE (34.5 µg/l) and 1,4-dioxane (7.5 µg/l) above their respective groundwater quality criteria. These are similar to the results from November 2021, although the 1,4-dioxane concentration dropped by more than 50 percent. After recent increases in 2021 in the concentrations of 1,1-DCE and, to a lesser extent, 1,4-dioxane at MW-28D, the June 2022 results showed a decrease in both compounds to levels less than the comparative criteria. At the deeper well in the MW-33D pair, the concentration of 1,4-dioxane decreased from levels consistently above the comparative criterion of 4.6 µg/l to a concentration of 3.0 µg/l.

The sample results for the remaining offsite wells screened in the deep zone of the Lower Patapsco aquifer (MW-29D, MW-31D, MW-32D, MW-34D and MW-35D) were non-detect for site-related COCs.

Consistent with sampling events from previous years, no site-related VOCs or 1,4-dioxane were detected in the samples collected from the Patuxent aquifer monitoring wells MW-36D and MW-30D-413. These results indicate that COCs have

not migrated downward through the Arundel Clay confining unit that hydraulically separates the deep sand zone of the Lower Patapsco aquifer and Patuxent aquifer.

5.2.2 NOVEMBER 2022

Groundwater samples and water level measurements were collected from all monitoring wells screened in the deep, confined zone of the Lower Patapsco aquifer and Patuxent aquifer and the one well screened in the shallow zone (MW-45) in November 2022.

A potentiometric surface contour map for the deep, confined zone of the Lower Patapsco aquifer is shown in Figure 8 using the water level data obtained from onsite and offsite monitoring wells during the November 2022 sampling event while the system was actively pumping. The potentiometric contours show the hydraulic influence of the groundwater withdrawals from the deep recovery wells RW-1D and RW-2D extends southward across the William-Scotsman property to the Maryland State Route 100. Further south of this pumping-induced hydraulic sink, the overall direction of groundwater flow in the deep zone of the Lower Patapsco aquifer is to the south/southeast from the Site. These observations are consistent with determinations from contour maps generated for previous monitoring events under pumping conditions. The hydraulic head gradients were consistent with and provided further confirmation for prior data demonstrating that the groundwater flow direction in the deep zone of the Lower Patapsco aquifer differs from the direction of flow in the shallow zone of this aquifer, which is generally to the north and west toward Stony Run. As discussed above, dissolved constituents (*e.g.*, VOCs) will migrate downward from the shallow to deep zones within the Lower Patuxent aquifer and with groundwater flowing through the sandy deposits comprising the deep zone, to the south-southeast of the former facility property.

No COCs were detected in the sample from shallow zone well MW-45, confirming that COCs have not migrated eastward from the Site in the shallow zone of the Lower Patapsco aquifer.

In general, the analytical data generated in November 2022 was consistent with previous data in demonstrating the presence of site-related constituents just over 1 mile hydraulically downgradient (south-southeast) of the Site in the deep, confined zone of the Lower Patapsco Aquifer. In addition, site-related COCs were detected in the sample from the deep zone of the Lower Patapsco aquifer screened by well MW-46D on the adjoining Verizon property to the north of the Site. The presence of detectable COC levels is most likely related to the proximity of the Verizon property to the Site. The total COC concentration in the MW-46D sample (134.3 µg/l) was slightly less than the level in the June 2022 sample (142.2 µg/l; Table 5). The concentrations of 1,1- DCE and 1,1- DCA show a decrease from the June to November 2022 sampling events, while the concentration of 1,4-dioxane increased. The reduction in 1,1-DCE and 1,1-DCA levels is believed to reflect the upgradient expansion of the inflow, or capture, area for the deep onsite groundwater recovery wells. All three of these COCs continued to exceed their respective comparative groundwater quality criteria.

In the offsite area immediately south of the Site, the sample from monitoring well MW-24D on the Williams-Scotsman property had the highest concentration of site-related COCs (1,322 µg/l). This total COC concentration was lower than that detected in June 2022, mostly due to a noticeable decline in the 1,1-DCE concentration (Table 5). The levels of other COCs 1,1-DCE, 1,1,1-TCA, and 1,1-DCA also declined when compared to the June sampling event. TCE continued to be present above the groundwater quality criterion, although the concentration decreased slightly from 8.6 µg/l (June 2022) to 7.7 µg/l (November 2022). Overall, these decreases may be the result of the resumption of onsite remedial pumping during the 3rd quarter of 2022.

Further downgradient, a total site-related COC concentration of 107.4 µg/l (106.2 µg/l in the duplicate sample) was detected in the MW-25D-130 sample. This concentration is slightly higher than the level present in the June 2022 event (90.4 µg/l), but the difference is not significant. The total concentrations of site-related COCs in the samples from the MW-25D-130 increased in 2022, in contrast to recent declines at these locations. Lower concentrations of site-related COCs were detected in the sample from the deeper well MW-25D-192 at this location (50.3 µg/l). Overall, the trend of declining concentrations

in this well dating back to 2017 continued to take place in 2022. In both wells in the MW-25D pair, concentrations of 1,1-DCE, 1,1-DCA, and 1,4-dioxane remain above their respective comparative groundwater quality criteria.

The majority of the sampling data for the deep, confined Lower Patapsco aquifer monitoring wells located further downgradient indicated non-detect to low concentrations of site related COCs (Figure 6 and Table 5). The highest concentrations were detected in the sample from the well screened from 263-273 ft bgs at the MW-30D location. The groundwater sample from this well (MW-30D-273) had concentrations of 1,1-DCE (31.3 µg/l) and 1,4-dioxane (7.0 µg/l) above their respective groundwater quality criteria. While 1,1-DCE levels continued a declining trend at this well during 2022, the 1,4-dioxane concentrations exhibited a noticeable (greater than 50 %) decrease in 2022.

The remainder of the downgradient wells screened in the deep portion of the Lower Patapsco aquifer had trace to low concentrations of 1,1-DCE, and 1,4-dioxane below the comparative criteria.

No site-related VOCs or 1,4-dioxane were detected in samples from wells MW-36D and MW-30D-413 screened in the Patuxent aquifer. These results indicate that COCs have not migrated downward through the Arundel Clay confining unit overlying the Patuxent aquifer.

6 SUMMARY AND CONCLUSIONS

6.1 COC DISTRIBUTION

The analytical results indicate comingled plumes of VOCs (primarily 1,1-DCE) and 1,4-dioxane extending from the Site to the south within the deep, confined zone of the Lower Patapsco aquifer, which corresponds to the direction of groundwater flow. The groundwater flow direction in the shallow zone of the Lower Patapsco aquifer is to the north, which is opposite that of the deep zone (Figure 4). Consequently, the analytical results from onsite monitoring wells and former shallow offsite monitoring wells MW-25 and MW-28 indicate that the occurrence of VOCs and 1,4-dioxane derived from historical releases at the former Kop-Flex facility do not extend to the south of the Site in the shallow zone of the Lower Patapsco aquifer (Table 5; WSP 2022).

The iso-concentration maps shown in Figures 9 and 10, depict the inferred horizontal distribution of 1,1-DCE and 1,4-dioxane within the deep zone of the Lower Patapsco aquifer based on the November 2022 sampling data. The maps also include data for the deep zone monitoring wells in the onsite area to provide a better understanding of the overall extent of the affected groundwater within this portion of the aquifer. Additionally, the contouring data includes historical results from four residential wells, 1245-OCM, 1227-OCM, 7932-AND, and 1054-MINN, to help delimit the eastern extent and southern terminus of the plumes. The plume maps were generated by gridding a logarithmic transform of the concentrations using the Kriging method. Non-detects were entered into the gridding algorithm at the laboratory reporting limit. The lowest concentration contour in each map was set to the Cleanup Criterion for each compound.

Based on the data from well MW-46D, the northern (upgradient) boundaries of the plume areas extend upgradient onto the neighboring Verizon property (Figures 9 and 10). The offsite wells containing the highest site-related VOC concentrations – MW-24D on the William Scotsman property and MW-25D well pair in the northeast corner of the Harmans Woods residential community – are located less than ¼ mile south of the Site. The only other deep zone monitoring well that had 1,1-DCE and/or 1,4-dioxane concentrations above the applicable groundwater comparative criteria was MW-30D-273 near the intersection of Twin Oaks Road and Old Camp Meade Road (Figures 6, 9, and 10; Table 5).

The inferred extents of COCs exceedences within the Lower Patapsco aquifer deep zone extend greater than 1 mile downgradient (south-southeast) from the southern property line of the Site to within approximately 400 feet of well MW-33D-295 located in the southern portion of the Andorick Acres community (Figures 9 and 10). Given the COC distributions shown in the iso-concentration maps, the impacted groundwater in the deep zone of the Lower Patapsco aquifer south of MD Route 100 consists of diffuse plumes characterized by relatively low contaminant concentrations. The downgradient plume boundary is based on the non-detectable concentrations of COCs in the samples from wells MW-31D and MW-34D. The inclusion of historical residential well results to the dataset used to generate the iso-concentration contours provides better interpolation of the downgradient extents of the comingled plumes. The inferred width of the plume spans approximately 1,600 feet at its widest point as measured perpendicular to the groundwater flow direction. Data that helps delimit the width of the plume is provided by non-detectable concentrations of COCs in well MW-29D to the east, and MW-32D to the west.

As mentioned above, evaluation of the sampling data indicates the permeable sand deposits comprising the deep confined zone of the Lower Patapsco aquifer represent the primary pathway for the offsite migration of COCs from the former Kop-Flex facility. Site-related COCs have not been identified – nor are they expected to be present – in the offsite portion of the shallow zone of the Lower Patapsco aquifer to the south of the Site. Furthermore, the presence of very low permeability units separating the shallow zone from the deeper zone of the Lower Patapsco aquifer – as well as a similar hydrostratigraphic unit between the deeper zone and the underlying Patuxent aquifer – preclude the presence of site-related volatile constituents in the soil vapor phase and intrusion of these contaminants into structures at the surface.

Evaluation of the historical water level data from the offsite monitoring wells consistently indicate a downward vertical flow component from the Lower Patapsco aquifer to the underlying Patuxent aquifer. However, data from monitoring wells MW-30D-413 and MW-36D screened in the Patuxent aquifer have continued to indicate no detections of site-related COCs. These sample results demonstrate that dissolved constituents comprising the plumes in the deep zone of the Lower Patapsco aquifer have not migrated through the dense, thick clayey deposits of the Arundel Clay confining unit.

6.2 COC TRENDS

Figure 11 includes plots of the concentrations of 1,1-DCE and 1,4-dioxane for monitoring wells located within or in proximity to the offsite plume boundary throughout their sampling histories. Several long-term trends can be observed in the recent sampling results from wells located within the plume area. At MW-24D, which is the closest monitoring point to the onsite deep recovery wells, there is no discernible long-term trend in the concentrations for these primary COCs. More recently, 1,1-DCE concentrations had been increasing since May 2020 before decreasing in November 2022. The concentrations of 1,4-dioxane in this well, which had also been increasing since 2020 dropped from a maximum of 475 ug/L in November 2021 to 165 ug/L in June and 148 ug/L in November 2022 (Table 5). The increases in 1,1-DCE and 1,4-dioxane occurring since 2020 may be due to desorption, or back diffusion, of constituents from fine-grained layers between November 2020 and November 2021, particularly during the fall of 2021 and spring/summer of 2022 when the System was shut down. The more recent decline in 1,1-DCE is most likely related to System re-start.

There is no discernible long-term trend at upgradient well MW-46D. More recently, 1,1-DCE concentrations have declined since 2020 and 1,4-dioxane concentrations have declined since 2021. These recent declines could be due to decreasing source mass in the onsite plume as the System operates.

Several in-plume wells farther downgradient exhibit long-term declines in COC concentrations. At MW-25D-130, a period of slow, steady declines in COC concentrations has occurred since 2016 (Figure 11; Table 5). These declines indicate that either this well is located within the capture radius of the hydraulic containment system or that downgradient migration of elevated COCs near MW-24D has been effectively curtailed by groundwater withdrawals. The latter explanation is supported by the observed increase in 1,1-DCE concentrations during June and November 2022 after system shut-down. Similarly, the deeper well in the MW-25D pair (MW-25D-192) shows an overall decreasing trend in COC concentrations since 2018, and more recently a brief increase in 1,1-DCE concentration while the system was down during the spring and summer of 2022.

Farther downgradient within the plume, long-term steady decreases in 1,1-DCE and 1,4-dioxane concentrations have occurred at MW-30D-273. These downgradient declines in concentrations could be due to multiple factors, including, natural attenuation, dilution due to mixing with less-affected water as the plume moves downgradient, or decreasing mass flux due to onsite remedial activities. The latter is more likely since concentrations of 1,4-dioxane, which is more recalcitrant in the environment than chlorinated VOCs concentrations, have declined as well.

At MW-33D-295 near the southeasternmost (downgradient) extent of the COC plumes and MW-28D along the western plume boundary, there is little or no long-term trend in the 1,1-DCE and 1,4-dioxane concentrations, except a decrease in 1,4-dioxane concentrations during the 2022 sampling events. The lack of a significant downward trend in COC concentrations at the plume margins is likely due to physical and chemical processes affecting the levels of dissolved contaminants being at a steady-state condition. These results indicate that the plume is not expanding at its southeastern or western margins. Further evidence is the consistent history of non-detect values or trace concentrations below the Cleanup Criteria for these compounds at peripheral wells MW-29D, MW-31D, and MW-32D.

6.3 PLANNED 2023 OFFSITE GROUNDWATER MONITORING ACTIVITIES

The collection of water level readings and groundwater quality samples from the 16 deep monitoring wells in the offsite area will continue at a semi-annual frequency during the 2023 calendar year in accordance with the procedures described in Section 5 of this report. WSP believes the existing monitoring well network is sufficient to monitor the distribution of site-related COCs in the offsite areas affected by releases at the former Kop-Flex facility property. The groundwater monitoring activities in 2023 will be conducted during the second and fourth quarters (first round has been completed in May and June). No sampling or water level measurement activities are currently planned for the first and third quarters of 2023.

As part of MDE's and U.S. EPA's approval for the use of the HydraSleeve™ sampler for the groundwater monitoring activities at the Site, the agencies requested that further evaluation be conducted on the applicability of this passive sampling method for collecting representative water quality samples from the aquifer system. Given the HydraSleeve™ sampler has been in continuous use for 6 years, WSP believes that sufficient data is available to complete a comparative assessment of the passive and conventional (low-flow) sampling methods for the Site monitoring network. Since this assessment will include conventional (Spring 2007 through Fall 2016) and passive (Winter 2016 through 2022) data from both onsite and offsite monitoring wells, the sampler performance evaluation will be provided in a separate report to MDE and U.S. EPA. The tentative date for the submittal of this report is September 2023.

7 ACRONYMS

ALS	ALS Global
bgs	Below Ground Surface
COC	Constituent of Concern
DCA	Dichloroethane
DCE	Dichloroethene
EPA	United States Environmental Protection Agency
MCL	Maximum Contaminant Levels
MDE	Maryland Department of the Environment
MSL	Mean Sea Level
MW	Monitoring Well
QC	Quality Control
SIM	selected ion monitoring
SOP	Standard Operating Procedure
TCA	Trichloroethane
TCE	Trichloroethene
µg/l	Micrograms per Liter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	Volatile Organic Compounds

8 REFERENCES

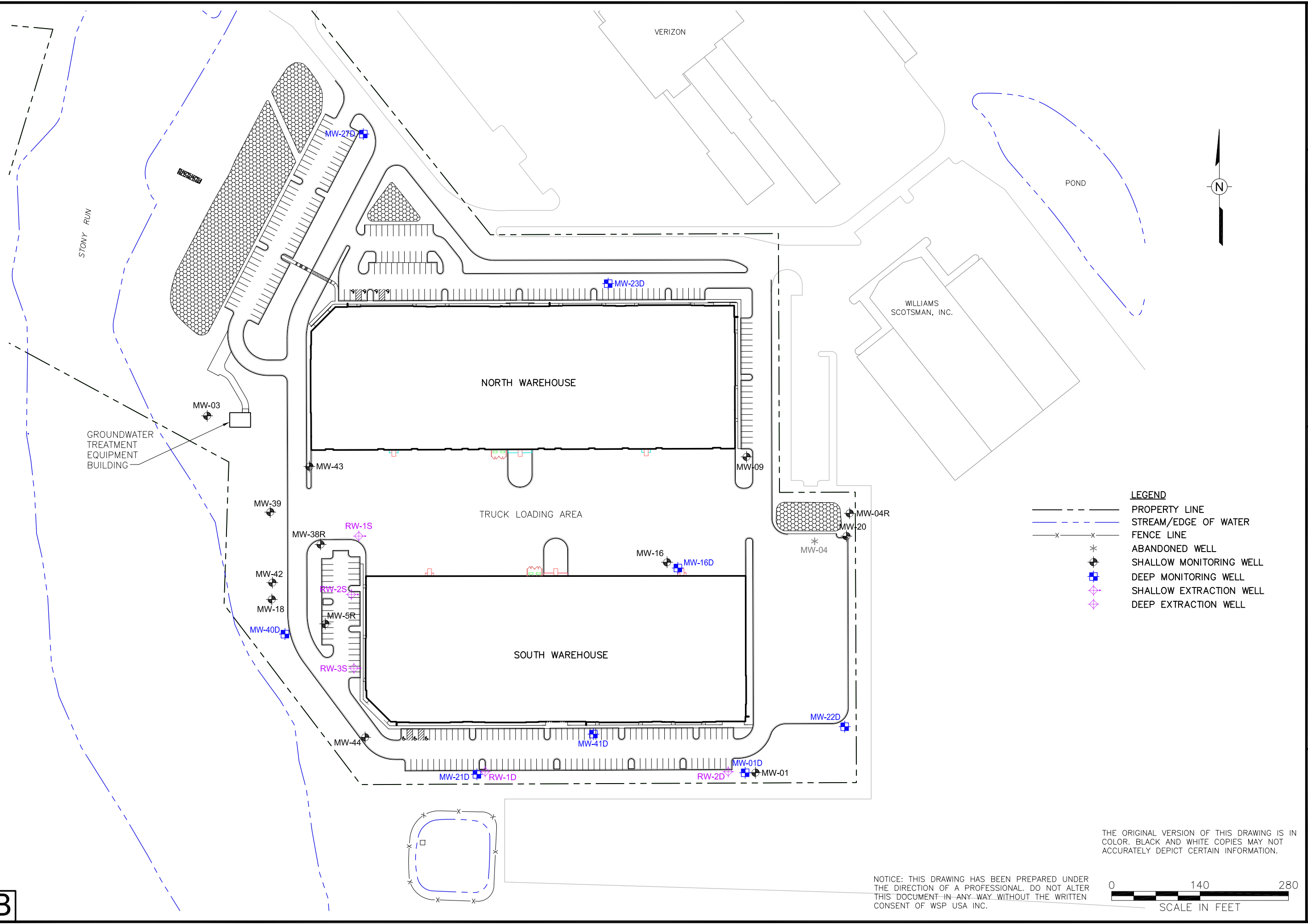
- State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater (October 2018) Interim Final Guidance (Update No. 3).
- United States Geological Survey (USGS) topographic 7.5-minute series quadrangle map for Relay, Maryland (revised 1974).
- WSP USA (September 2015) Groundwater Monitoring Plan, Former Kop-Flex facility, Hanover, Maryland – Voluntary Cleanup Program Site #31.
- WSP USA (May 2020) Quarterly Offsite Report NO. 14 – Offsite Area, Former Kop-Flex Facility Site (January 2020 through March 2020).
- WSP USA (August 2020) Quarterly Offsite Report NO. 15 – Offsite Area, Former Kop-Flex Facility Site (April 2020 through June 2020).
- WSP USA (January 2021) Quarterly Offsite Report NO. 16 – Offsite Area, Former Kop-Flex Facility Site (October 2020 through December 2020).
- WSP USA (June 2020) 2020 Offsite Groundwater Monitoring Report, Former Kop-Flex Facility Site, Hanover, MD.
- GSI Environmental Inc. 2012. GSI Mann-Kendall Toolkit for Constituent Trend Analysis. User’s Manual. Version 1.0. November.
- The Interstate Technology & Regulatory Council. 2013. Groundwater Statistics for Monitoring and Compliance, Statistical Tools for the Project Life Cycle. December.
- U.S. Environmental Protection Agency. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance. EPA/530/R/09-007. Washington D.C. March.

FIGURES



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B



- LEGEND**
- PROPERTY LINE
 - - - - - STREAM/EDGE OF WATER
 - x - x - FENCE LINE
 - * ABANDONED WELL
 - SHALLOW MONITORING WELL
 - DEEP MONITORING WELL
 - ◊ SHALLOW EXTRACTION WELL
 - ◇ DEEP EXTRACTION WELL

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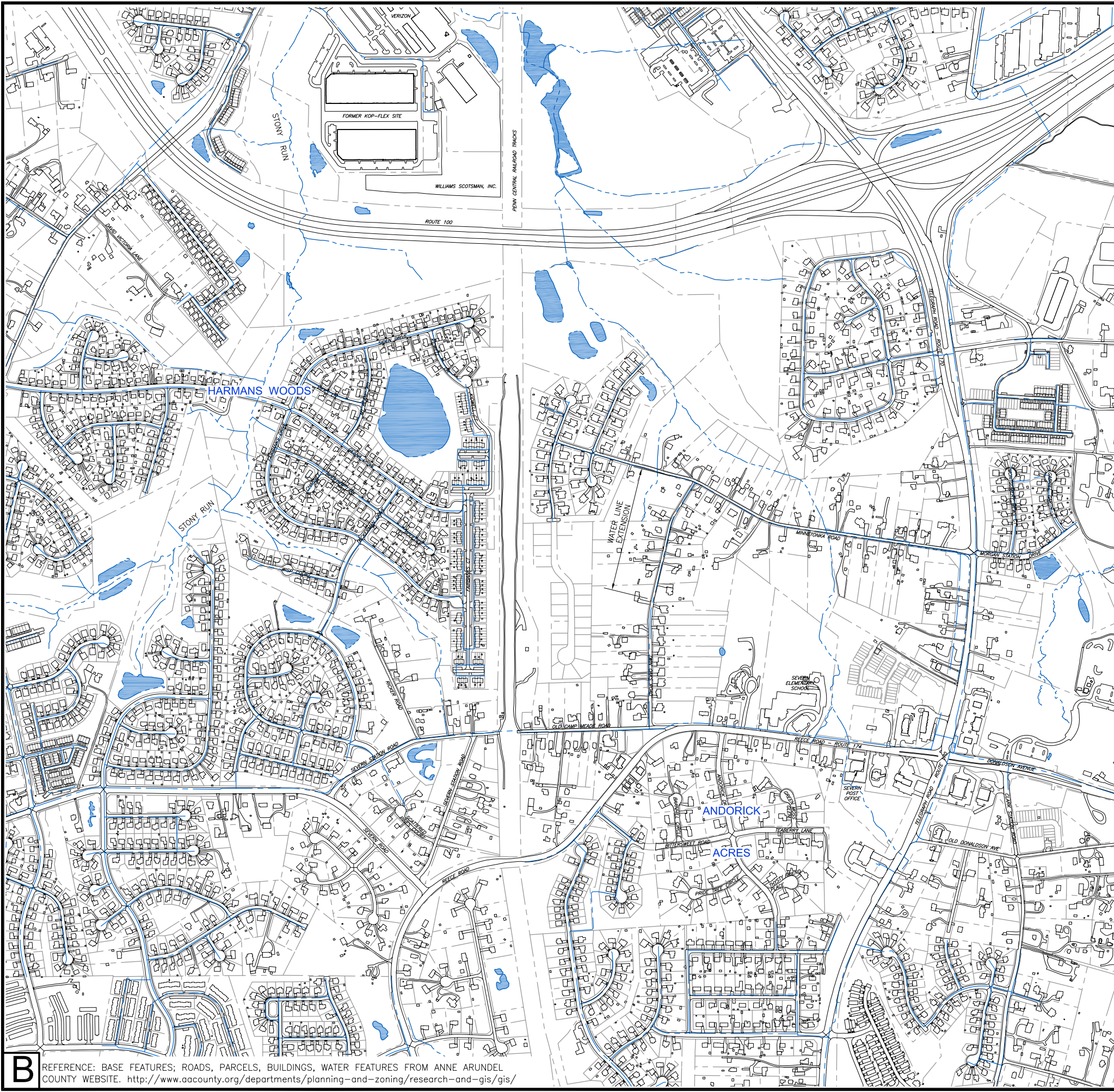
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 Checked: CC 5/19/2022
 Approved: RBY
 DWG Name: 314V5608.011-024

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

FIGURE 1
 SITE LAYOUT

WSP USA Inc. | WSP USA Inc. TECHNOLOGY DR
 13530 DULLES
 SUITE 300
 HERNDON, VA 20171
 TEL: +1 703.709.6500

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- LEGEND**
- PROPERTY LINE
 - WATER MAIN
 - WATER MAIN EXTENSION
 - STREAM
 - WATER BODY


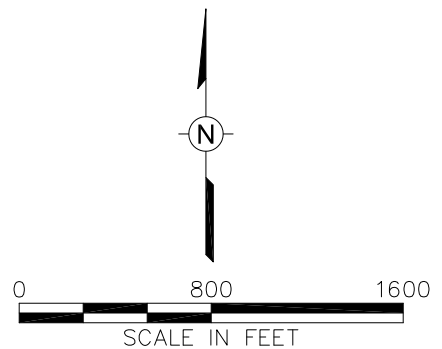
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FIGURE 2
 HANOVER-SEVERN AREA IN VICINITY OF
 FORMER KOP-FLEX SITE

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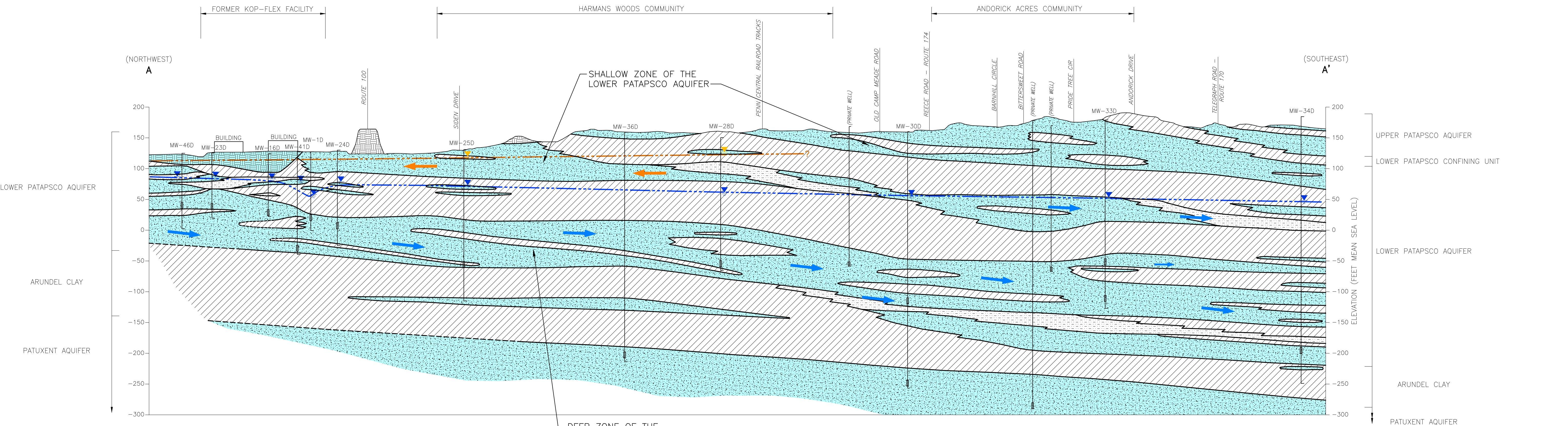
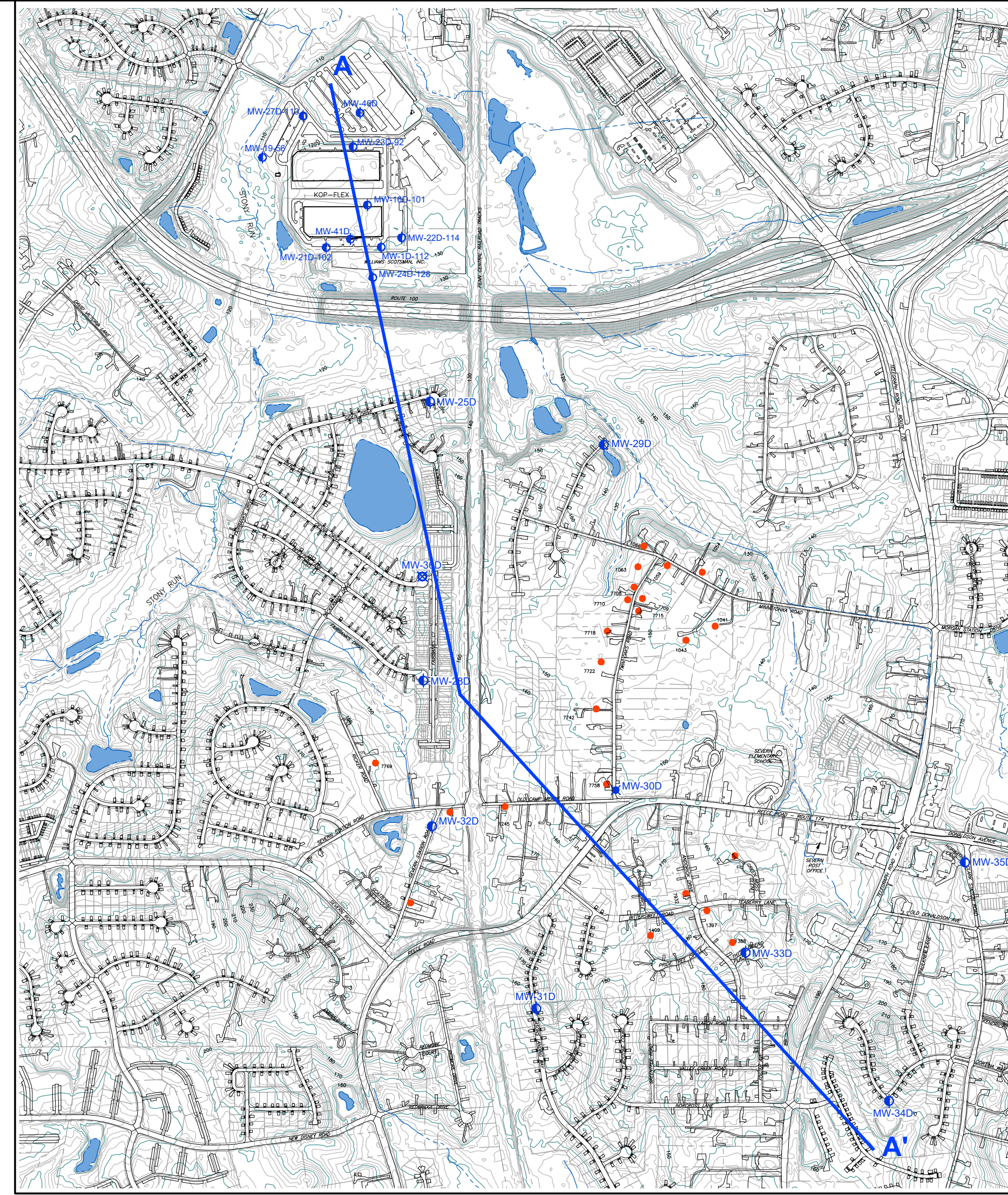
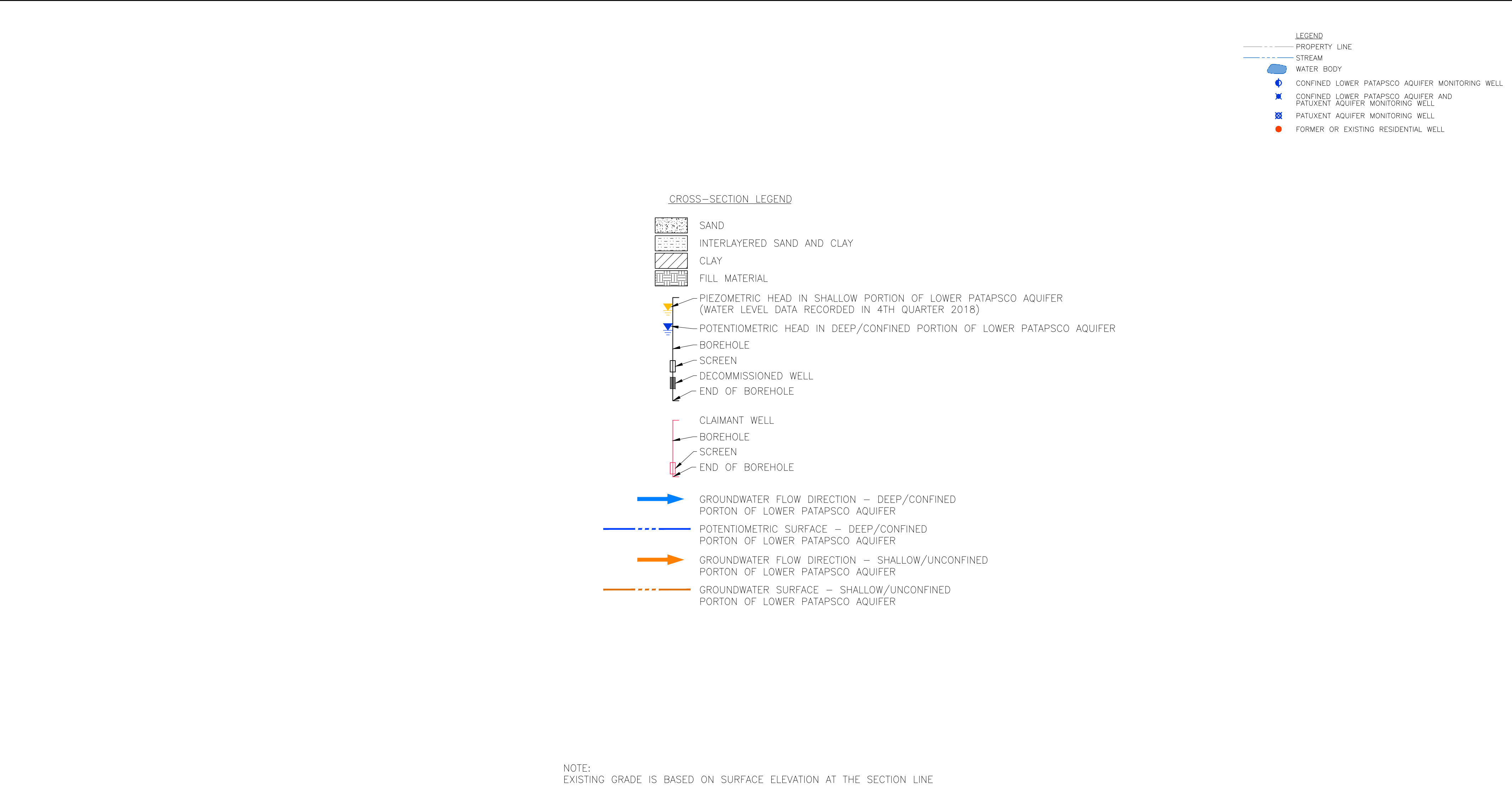



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REVISIONS		DATE
REV	DESCRIPTION	

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HYDROGEOLOGIC CROSS-SECTION AND CONCEPTUAL MODEL OF GROUNDWATER FLOW SYSTEM
FORMER KOP-FLEX FACILITY SITE
HANOVER, MARYLAND

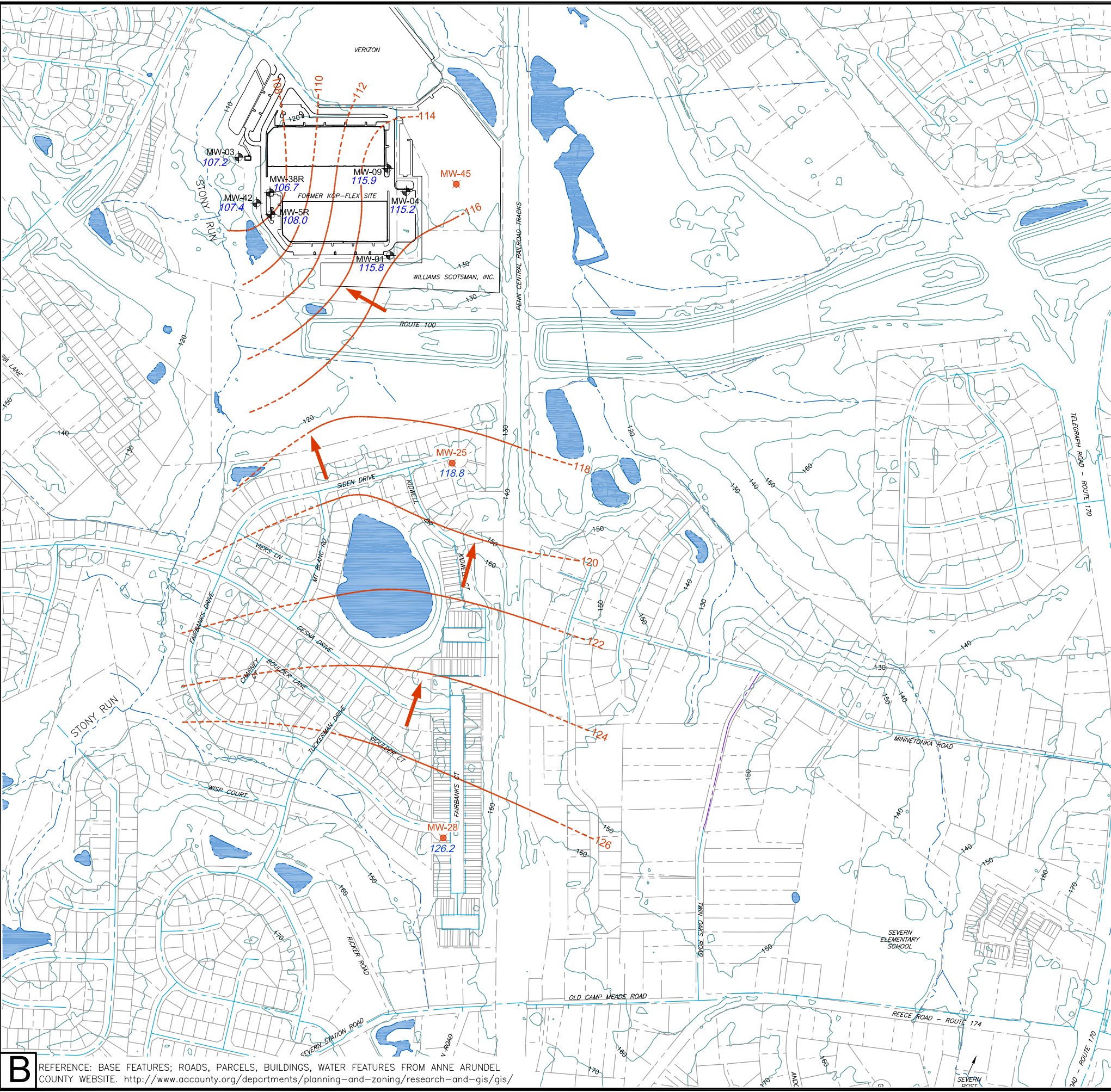
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FIGURE 3
Drawing Number
314V1545.011-096

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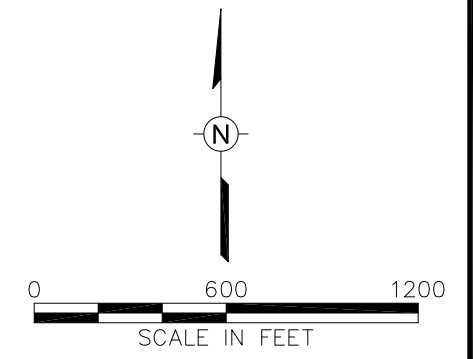
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- LEGEND**
- PROPERTY LINE
 - GROUND SURFACE CONTOUR
 - WATER MAIN
 - WATER MAIN EXTENSION
 - STREAM
 - WATER BODY
 - ⊕ ONSITE SHALLOW MONITORING WELL
 - ⊗ OFFSITE SHALLOW MONITORING WELL
 - 118.8 GROUNDWATER ELEVATION
 - GROUNDWATER FLOW DIRECTION
 - - - GROUNDWATER SURFACE CONTOUR, NOVEMBER 2018 (DASHED WHERE INFERRED)

- NOTES:**
- FIGURE DEPICTS THE GROUNDWATER SURFACE IN SHALLOW (UNCONFINED) ZONE OF THE LOWER PATAPSCO AQUIFER.
 - GROUNDWATER ELEVATION DATA IN THIS FIGURE WERE COLLECTED IN NOVEMBER 2018.
 - WELLS MW-25 AND MW-28 WERE ABANDONED IN AUGUST 2019.



B REFERENCE: BASE FEATURES; ROADS, PARCELS, BUILDINGS, WATER FEATURES FROM ANNE ARUNDEL COUNTY WEBSITE. <http://www.aacounty.org/departments/planning-and-zoning/research-and-gis/gis/>

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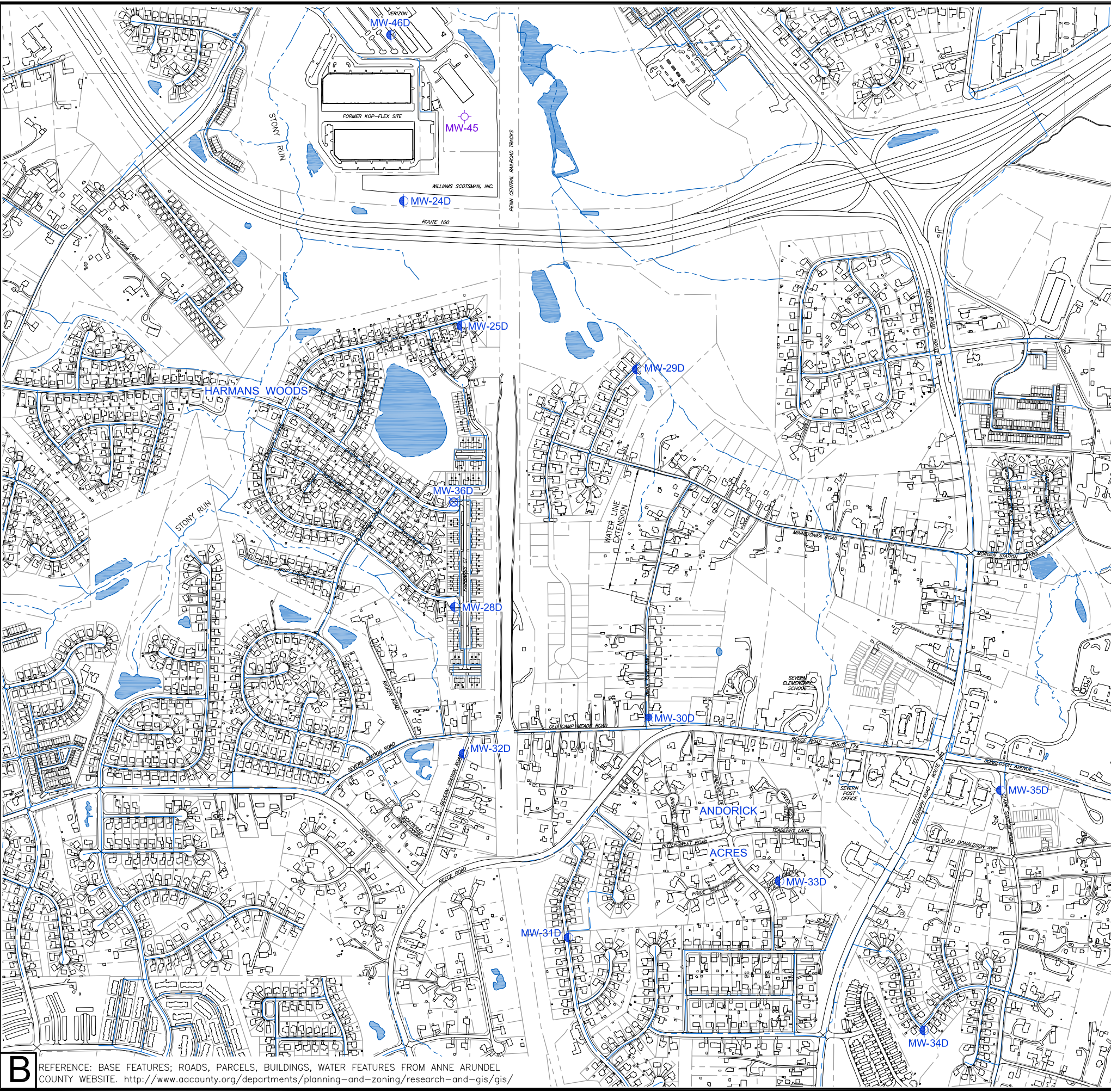
FORMER KOP-FLEX FACILITY
 HANOVER, MARYLAND
 PREPARED FOR
 EMERSUB 16 LLC
 ST. LOUIS, MISSOURI

FIGURE 4
 GROUNDWATER SURFACE FOR THE SHALLOW,
 ZONE OF LOWER PATAPSCO AQUIFER IN THE
 ONSITE AND OFFSITE AREA

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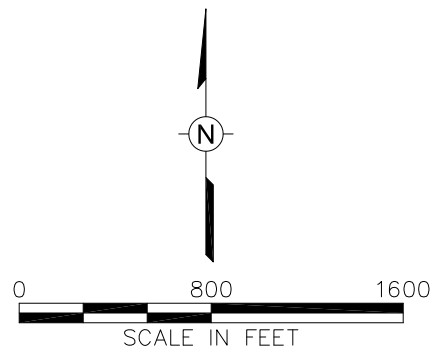
- LEGEND**
- PROPERTY LINE
 - WATER MAIN
 - - - WATER MAIN EXTENSION
 - STREAM
 - WATER BODY
 - SHALLOW MONITORING WELL
 - CONFINED LOWER PATAPSCO AQUIFER MONITORING WELLS
 - CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
 - ⊗ PATUXENT AQUIFER MONITORING WELLS

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FIGURE 5
 OFFSITE MONITORING WELL LOCATIONS
 IN LOWER PATAPSCO AQUIFER AND
 PATUXENT AQUIFER

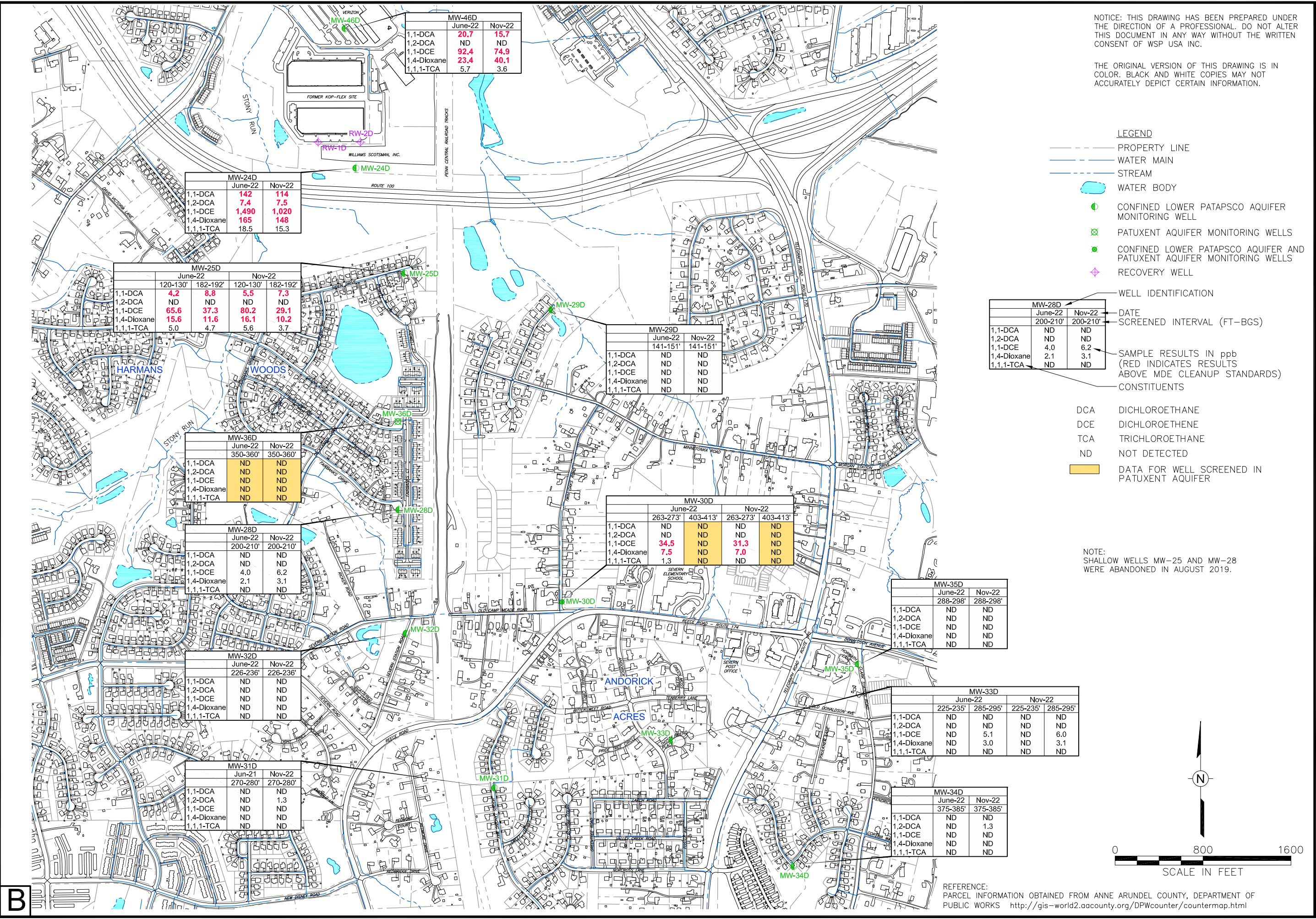
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- LEGEND**
- PROPERTY LINE
 - WATER MAIN
 - STREAM
 - WATER BODY
 - CONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
 - PATUXENT AQUIFER MONITORING WELLS
 - CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
 - RECOVERY WELL

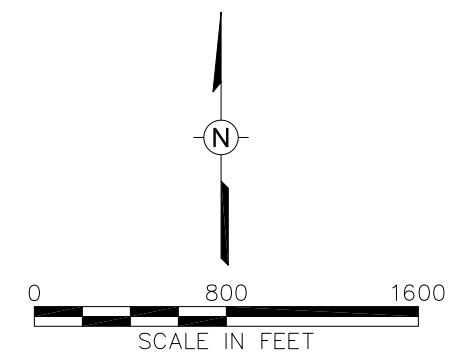
WELL IDENTIFICATION

	June-22	Nov-22
1,1-DCA	ND	ND
1,2-DCA	ND	ND
1,1-DCE	4.0	6.2
1,4-Dioxane	2.1	3.1
1,1,1-TCA	ND	ND

DATE
SCREENED INTERVAL (FT-BGS)
SAMPLE RESULTS IN ppb (RED INDICATES RESULTS ABOVE MDE CLEANUP STANDARDS)
CONSTITUENTS

- DCA DICHOROETHANE
- DCE DICHOROETHENE
- TCA TRICHOOROETHANE
- ND NOT DETECTED
- DATA FOR WELL SCREENED IN PATUXENT AQUIFER

NOTE: SHALLOW WELLS MW-25 AND MW-28 WERE ABANDONED IN AUGUST 2019.



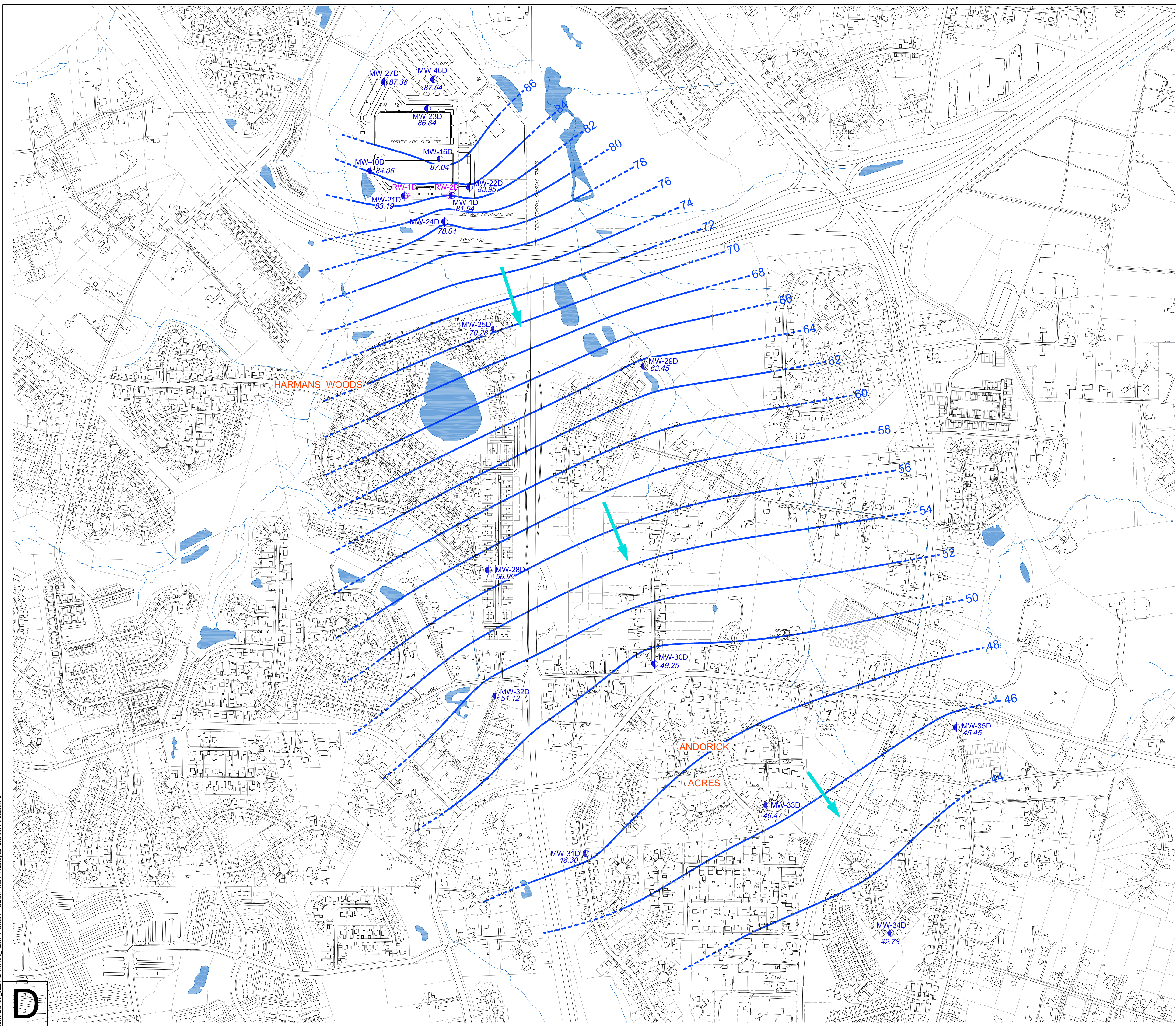
REFERENCE: PARCEL INFORMATION OBTAINED FROM ANNE ARUNDEL COUNTY, DEPARTMENT OF PUBLIC WORKS <http://gis-world2.aacounty.org/DPWcounter/countermap.html>

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FIGURE 6
GROUNDWATER MONITORING RESULTS, LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER OFFSITE MONITORING WELLS - 2022

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- LEGEND**
- PROPERTY LINE
 - STREAM
 - WATER BODY
 - MONITORING WELL
 - ◆ RECOVERY WELL
 - 87.04 GROUNDWATER SURFACE ELEVATION (FEET MSL)
 - - - GROUNDWATER SURFACE CONTOUR (DASHED WHERE INFERRED)
 - INFERRED GROUNDWATER FLOW DIRECTION

NOTE:
 FIGURE DEPICTS THE POTENTIOMETRIC SURFACE IN THE DEEP (CONFINED) ZONE OF THE LOWER PATAPSCO AQUIFER.

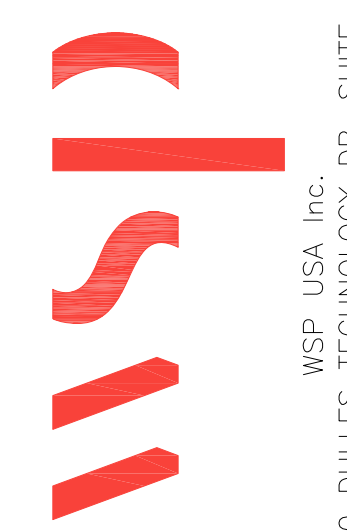
REVISIONS	
REV	DESCRIPTION

DRAWN BY	ECC	SEAL
CHECKED	6/16/2023	
APPROVED		

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POTENTIOMETRIC SURFACE CONTOUR MAP UNDER NON-PUMPING CONDITIONS, DEEP ZONE OF THE LOWER PATAPSCO AQUIFER - JUNE 2022
 FORMER KOP-FLEX FACILITY SITE
 HANOVER, MARYLAND
 PREPARED FOR
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 ST. LOUIS, MISSOURI



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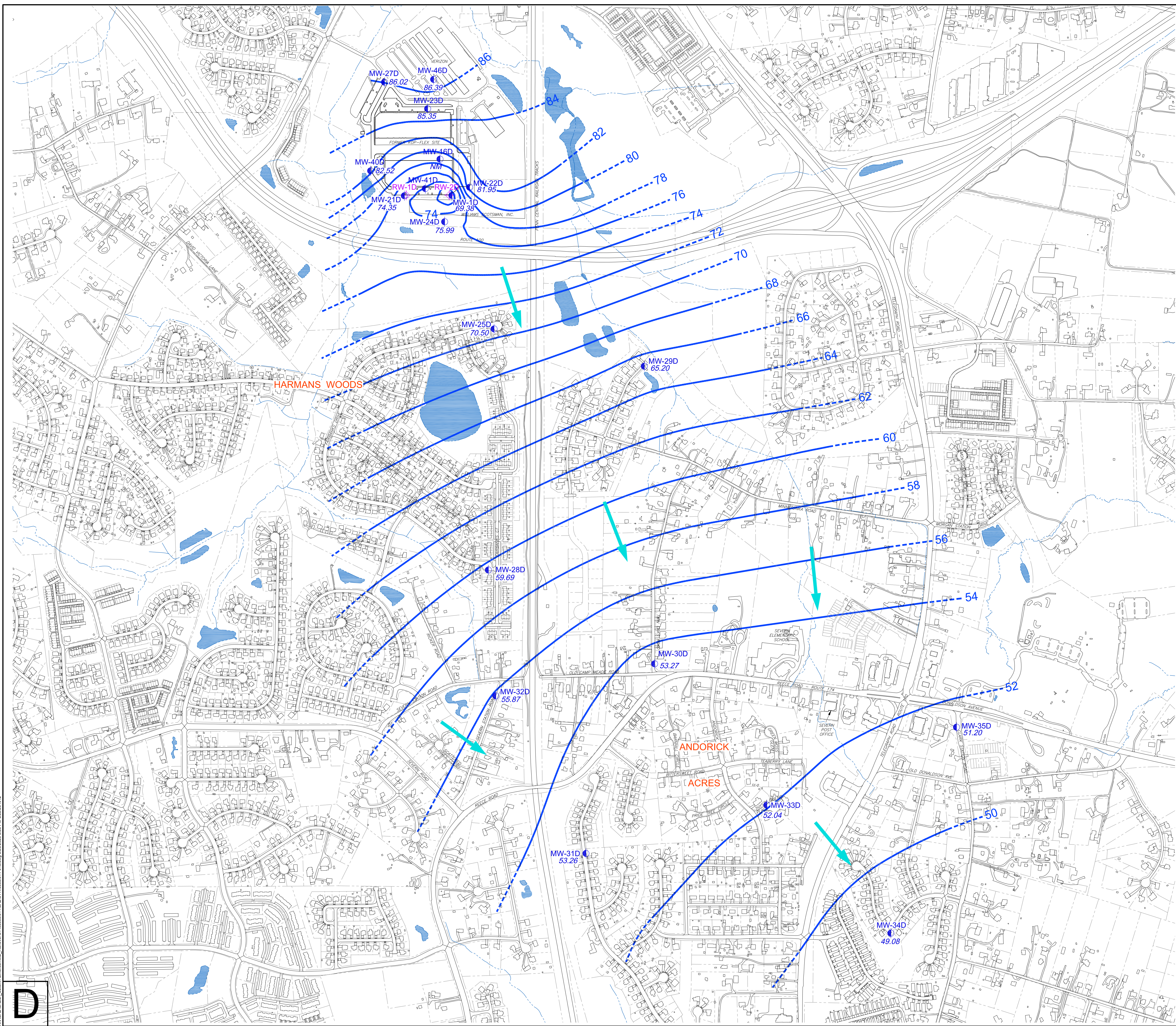
FIGURE 7
 Drawing Number
314V5608.011-023

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- LEGEND**
- PROPERTY LINE
 - STREAM
 - WATER BODY
 - MONITORING WELL
 - ◆ RECOVERY WELL
 - 72.18 GROUNDWATER SURFACE ELEVATION (FEET MSL)
 - - - GROUNDWATER SURFACE CONTOUR (DASHED WHERE INFERRED)
 - INFERRED GROUNDWATER FLOW DIRECTION

NOTE:
 FIGURE DEPICTS THE POTENTIOMETRIC SURFACE IN THE DEEP (CONFINED) ZONE OF THE LOWER PATAPSCO AQUIFER.

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APPROVED				

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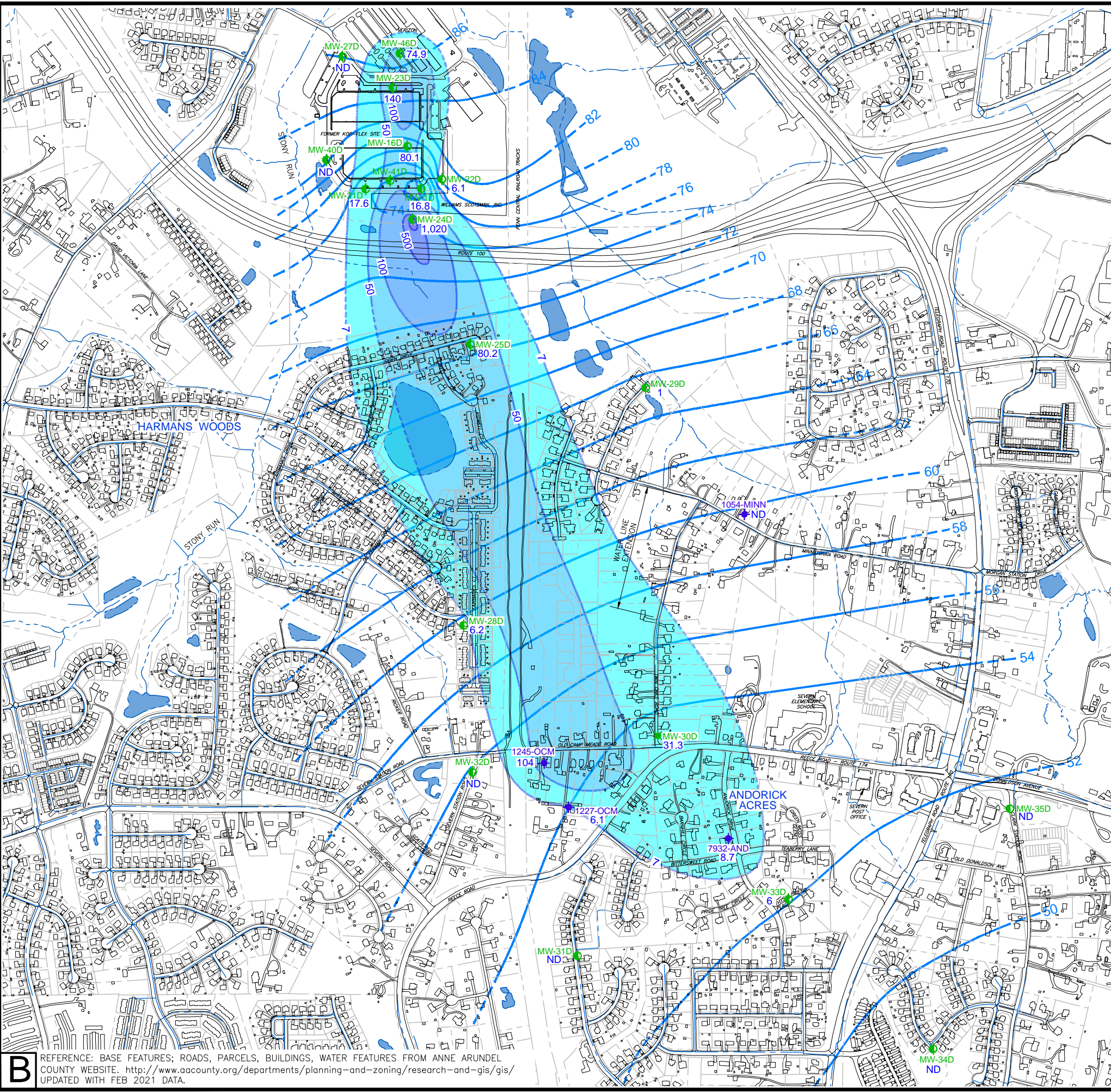
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POTENTIOMETRIC SURFACE CONTOUR MAP
UNDER PUMPING CONDITIONS, DEEP ZONE OF THE
LOWER PATAPSCO AQUIFER -- NOVEMBER 2022
FORMER KOP-FLEX FACILITY SITE
HANOVER, MARYLAND
 PREPARED FOR
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ST. LOUIS, MISSOURI

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FIGURE 8
 Drawing Number
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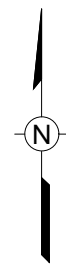
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- LEGEND**
- PROPERTY LINE
 - WATER MAIN
 - STREAM
 - WATER BODY
 - CONFINED LOWER PATAPSCO AQUIFER MONITORING WELLS
 - CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
 - PRIVATE WATER-SUPPLY WELL
 - - - POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
 - ND NOT DETECTED
 - 76 1,1-DCE CONCENTRATION (ppb)
 - INFERRED 1,1-DCE ISO-CONCENTRATION CONTOUR (ppb)
 - - - INFERRED 1,1-DCE ISO-CONCENTRATION CONTOUR (ppb) CHARACTERIZED BY HIGHER UNCERTAINTY GIVEN LOCATIONS OF SAMPLING POINTS
 - 7 TO <50
 - 50 TO <100
 - 100 TO <500
 - 500 TO <1,000
 - ≥1,000

NOTE: HISTORICAL DATA FROM SEVERAL PRIVATE WATER WELLS SAMPLED BETWEEN 2013 AND 2020 WERE USED TO GENERATE THE ISO-CONCENTRATION CONTOURS.



0 800 1600

SCALE IN FEET

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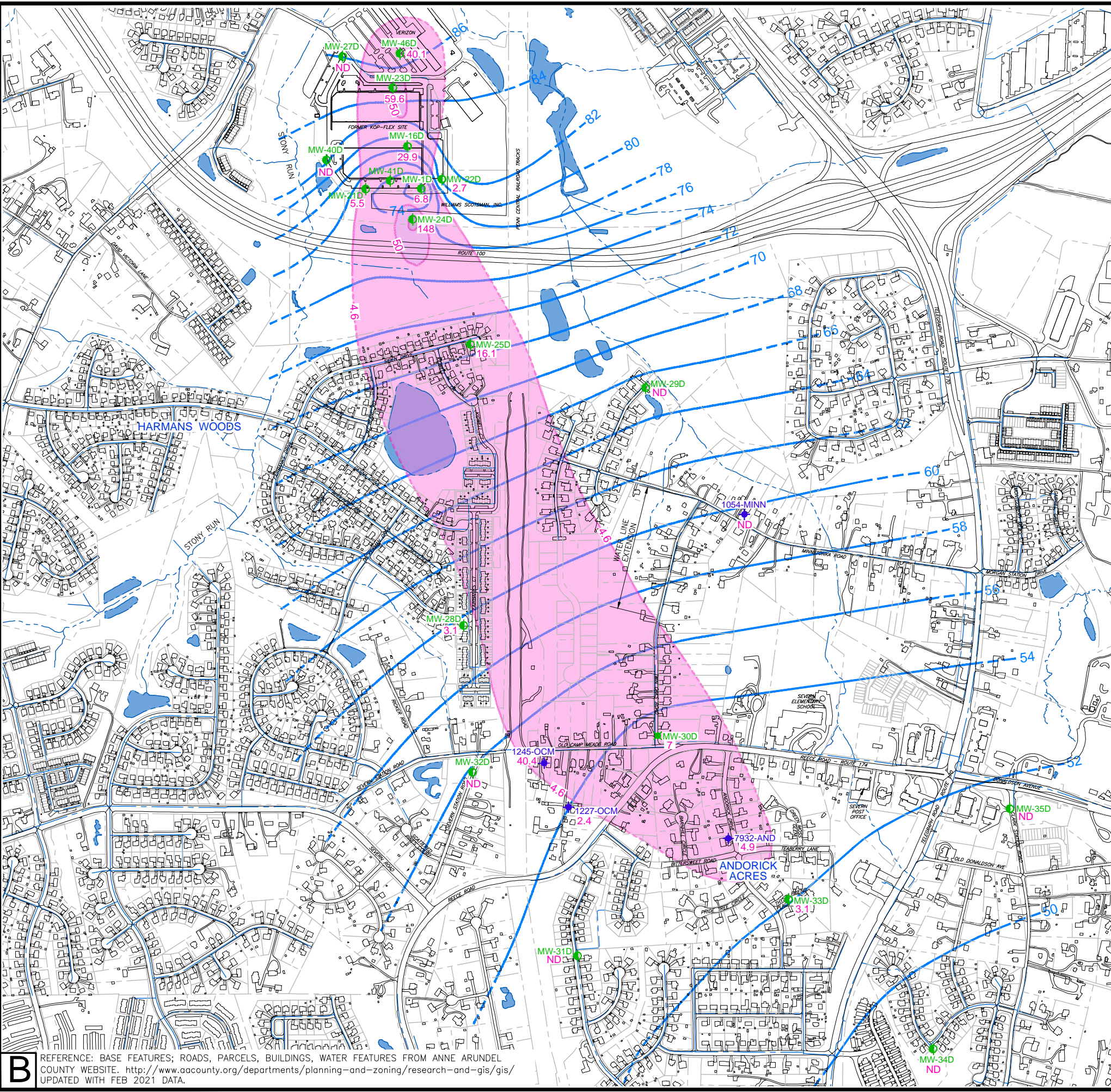
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FIGURE 9
INFERRED 1,1-DCE DISTRIBUTION IN THE
DEEP ZONE OF LOWER PATAPSCO AQUIFER -
NOVEMBER 2022

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- LEGEND**
- PROPERTY LINE
 - WATER MAIN
 - STREAM
 - WATER BODY
 - CONFINED LOWER PATAPSCO AQUIFER MONITORING WELLS
 - CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
 - PRIVATE WATER-SUPPLY WELL
 - POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
 - ND NOT DETECTED
 - 76 1,4-DIOXANE CONCENTRATION (ppb)
 - INFERRED 1,4-DIOXANE ISO-CONCENTRATION CONTOUR (ppb)
 - INFERRED 1,4-DIOXANE ISO-CONCENTRATION CONTOUR (ppb) CHARACTERIZED BY HIGHER UNCERTAINTY GIVEN LOCATIONS OF SAMPLING POINTS
 - 4.6 TO <50
 - 50 TO <100
 - >=100

NOTE: HISTORICAL DATA FROM SEVERAL PRIVATE WATER WELLS SAMPLED BETWEEN 2013 AND 2020 WERE USED TO GENERATE THE ISO-CONCENTRATION CONTOURS.

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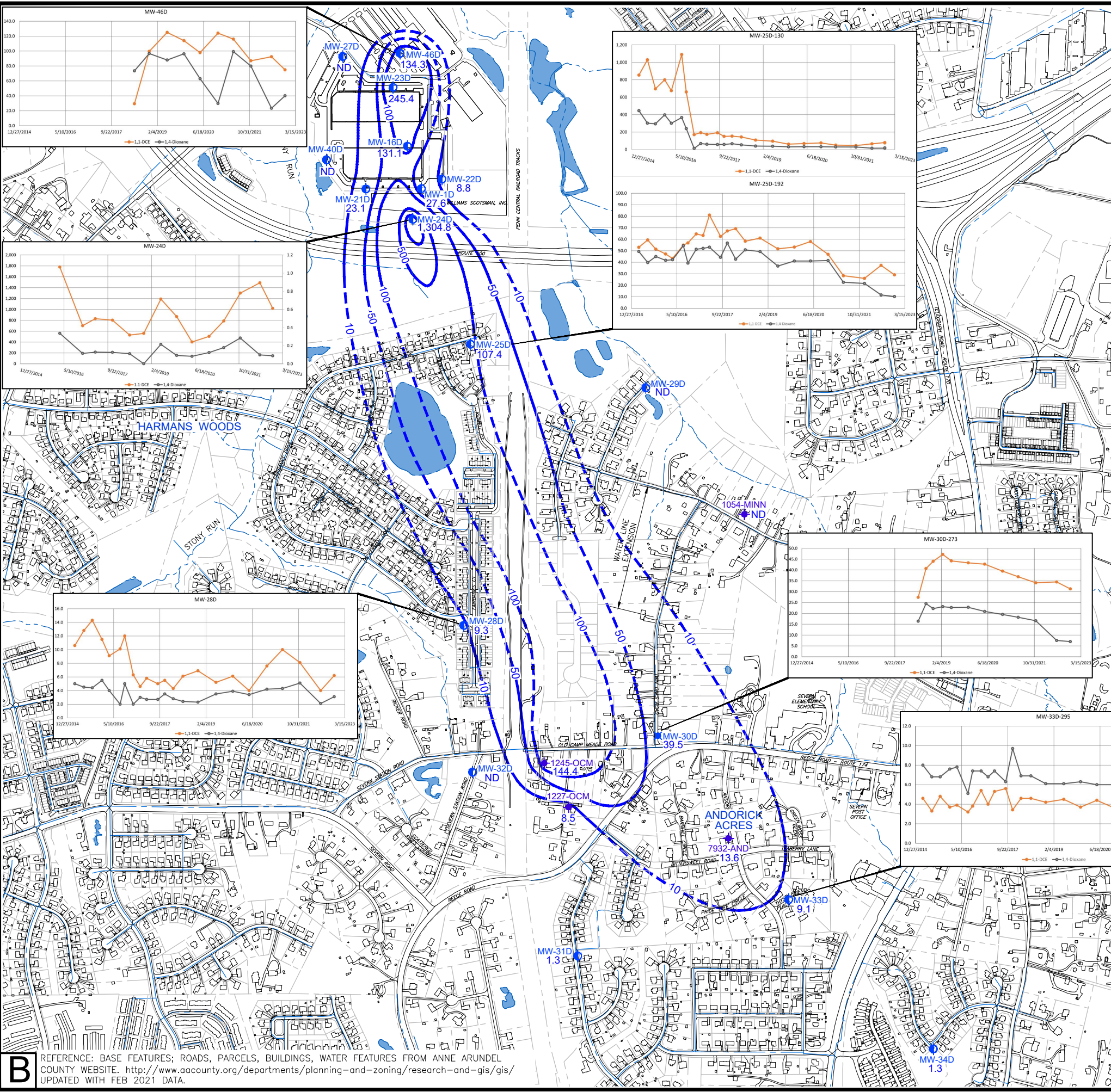
FIGURE 10
INFERRED 1,4-DIOXANE DISTRIBUTION IN THE
DEEP ZONE OF LOWER PATAPSCO AQUIFER -
NOVEMBER 2022

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LEGEND

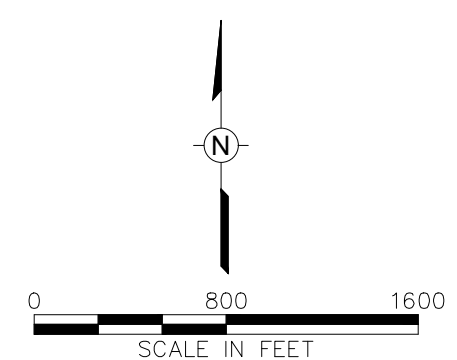
- PROPERTY LINE
- WATER MAIN
- STREAM
- WATER BODY
- DEEP CONFINED ZONE LOWER PATAPSCO AQUIFER MONITORING WELLS
- ✕ DEEP CONFINED ZONE LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- ◆ RESIDENTIAL SUPPLY WELL
- 81.4 TOTAL COC CONCENTRATION (ppb)
- ND NOT DETECTED

TOTAL COCs = [111-TCA] + [11-DCE] + [11-DCA] + [1,2-DCA] + [1,4-DIOXANE]

TCA TRICHLOROETHANE
 DCE DICHLOROETHENE
 DCA DICHLOROETHANE
 [] CONCENTRATION (ppb)

— INFERRED TOTAL COC ISO-CONCENTRATION CONTOUR (ppb)
 - - - INFERRED TOTAL COC ISO-CONCENTRATION CONTOUR (ppb) CHARACTERIZED BY HIGHER UNCERTAINTY GIVEN LOCATIONS OF SAMPLING POINTS

NOTE:
 THE ISOCONCENTRATION CONTOUR DATA ARE GENERATED FROM THE RESULTS OF GROUNDWATER SAMPLES COLLECTED IN NOVEMBER 2022.



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FIGURE 11
 TOTAL COC DISTRIBUTION IN THE DEEP ZONE OF THE LOWER PATAPSCO AQUIFER WITH CONCENTRATION VS. TIME PLOTS FOR MONITORING WELLS IN THE PLUME

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TABLES

Table 1
Construction Details for Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland (a)

Well ID	Installation Date	Casing Type	Screen Type	TOC Elevation (feet AMSL)	Total Depth (feet BTOC)	Screen Length (feet)	Screen Interval					
							Depth (ft-bgs)	Depth (ft-bgs)	Elevation (feet AMSL)	Elevation (feet AMSL)		
<i>Shallow (Unconfined) Lower Patapsco Aquifer</i>												
MW-25 (Abandoned August 2019)	07/30/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	130.6	40	10.0	30.0	-	40.0	100.60	-	90.60
MW-28 (Abandoned August 2019)	07/09/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	150.5	45	10.0	35.0	-	45.0	115.50	-	105.50
MW-45	03/12/17	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	126.7	38	10.0	28.0	-	38.0	98.72	-	88.72
<i>Deep (Confined) Lower Patapsco Aquifer</i>												
MW-24D	06/14/12	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	129.1	155	10.0	145.0	-	155.0	-15.90	-	-25.90
MW-25D-130	06/27/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	130.5	130	10.0	120.0	-	130.0	10.50	-	0.50
MW-25D-192	06/25/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	130.5	192	10.0	182.0	-	192.0	-51.50	-	-61.50
MW-28D	07/09/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	150.5	210	10.0	200.0	-	210.0	-49.50	-	-59.50
MW-29D	03/09/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	131.9	151	10.0	141.0	-	151.0	-9.08	-	-19.08
MW-30D-273	04/11/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	153.5	273	10.0	263.0	-	273.0	-109.46	-	-119.46
MW-31D	08/04/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	162.5	280	10.0	270.0	-	280.0	-107.50	-	-117.50
MW-32D	03/15/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	156.1	266	10.0	256.0	-	266.0	-99.86	-	-109.86
MW-33D-236	07/21/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	178.6	236	10.0	226.0	-	236.0	-47.40	-	-57.40
MW-33D-295	07/21/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	178.3	295	10.0	285.0	-	295.0	-106.70	-	-116.70
MW-34D	04/19/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	183.9	425	10.0	415.0	-	425.0	-231.09	-	-241.09
MW-35D	08/16/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	177.8	298	10.0	288.0	-	298.0	-110.20	-	-120.20
MW-46D	04/26/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	124.77	116	10.0	106.0	-	116.0	18.77	-	8.77
<i>Patuxent Aquifer</i>												
MW-30D-413	04/09/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	153.1	413.00	10.0	403.0	-	413.0	-249.87	-	-259.87
MW-36D	03/28/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	158.7	360.00	10.0	350.0	-	360.0	-191.29	-	-201.29

Notes:

a/ AMSL = above mean sea level; BTOC = below top of casing; ft-bgs = feet below ground surface.

PVC = polyvinyl chloride; Sch. = schedule

Table 2

**Historical Groundwater Elevation Data - Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Aquifer/Zone	TOC Elevation	3/17/2015		6/15/2015		9/21/2015		1/4/2016		3/21/2016		12/7/2016	
			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-25S *	Unconfined LPA	130.6	12.84	117.76	12.46	118.14	14.33	116.27	13.48	117.12	12.75	117.85	14.61	115.99
MW-28S *	Unconfined LPA	150.5	25.56	124.94	25.24	125.26	25.88	124.62	25.35	125.15	25.34	125.16	26.8	123.70
MW-45	Unconfined LPA	126.7	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-24D	Confined LPA	129.1	50.9	78.20	49.29	79.81	NM	-	NM	-	44.38	84.72	46.3	82.80
MW-25-130	Confined LPA	130.5	58.7	71.80	57.59	72.91	58.26	72.24	53.95	76.55	51.01	79.49	50.27	80.23
MW-25-192	Confined LPA	130.5	59.99	70.51	56.4	74.10	57.23	73.27	53.05	77.45	50.27	80.23	52.4	78.10
MW-28D	Confined LPA	150.5	93.06	57.44	89.36	61.14	90.34	60.16	84.62	65.88	80.72	69.78	83.35	67.15
MW-29D	Confined LPA	131.9	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-273	Confined LPA	153.5	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-31D	Confined LPA	162.5	114.02	48.48	108.58	53.92	109.51	52.99	102.44	60.06	98.41	64.09	114.20	48.30
MW-32D	Confined LPA	156.1	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-33D-235	Confined LPA	178.6	131.83	46.77	125.66	52.94	127.11	51.49	119.14	59.46	115.25	63.35	114.2	64.40
MW-33D-295	Confined LPA	178.3	131.52	46.78	125.42	52.88	126.91	51.39	118.90	59.40	114.96	63.34	131.50	46.80
MW-34D	Confined LPA	183.9	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-35D	Confined LPA	177.8	132.01	45.79	126.28	51.52	127.89	49.91	118.96	58.84	114.34	63.46	131.91	45.89
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-413	Patuxent	153.1	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-36D	Patuxent	158.7	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-

Notes:

LPA = Lower Patapsco Aquifer

NM = Not Measured

TOC = Top of Casing

* Well abandoned in August 2019

Table 2

**Historical Groundwater Elevation Data - Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Aquifer/Zone	TOC Elevation	5/1/2017		8/31/2017		11/14/2017		2/13/2018		5/31/2018		8/23/2018		11/8/2018	
			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	Depth to Water	Groundwater Elevation
MW-25S *	Unconfined LPA	130.6	14.02	116.58	14.09	116.51	14.6	116.00	14.56	116.04	13.10	117.50	NM	-	11.84	118.76
MW-28S *	Unconfined LPA	150.5	27.4	123.10	27.2	123.30	27.22	123.28	27.48	123.02	27.42	123.08	NM	-	24.33	126.17
MW-45	Unconfined LPA	126.7	13.67	113.05	NM	-	NM	-	NM	-	12.98	113.74	NM	-	NM	-
MW-24D	Confined LPA	129.1	48.35	80.75	48.35	80.75	51.99	77.11	NM	-	50.94	78.16	NM	-	NM	-
MW-25-130	Confined LPA	130.5	53.80	76.70	61.38	69.12	58.46	72.04	58.31	72.19	58.23	72.27	59.53	70.97	58.75	71.75
MW-25-192	Confined LPA	130.5	53.11	77.39	60.36	70.14	58.71	71.79	57.49	73.01	57.40	73.10	58.69	71.81	57.63	72.87
MW-28D	Confined LPA	150.5	82.72	67.78	94.55	55.95	89.03	61.47	87.37	63.13	88.75	61.75	90.98	59.52	88.30	62.20
MW-29D	Confined LPA	131.9	NM	-	NM	-	NM	-	NM	-	64.94	66.98	66.56	65.36	65.03	66.89
MW-30D-273	Confined LPA	153.5	NM	-	NM	-	NM	-	NM	-	98.66	54.88	100.70	52.84	98.14	55.40
MW-31D	Confined LPA	162.5	100.24	62.26	115.67	46.83	107.21	55.29	106.29	56.21	106.80	55.70	109.95	52.55	106.27	56.23
MW-32D	Confined LPA	156.1	NM	-	NM	-	NM	-	NM	-	97.90	58.24	100.65	55.49	98.97	57.17
MW-33D-235	Confined LPA	178.6	117.26	61.34	133.39	45.21	124.55	54.05	123.79	54.81	124.00	54.60	127.52	51.08	125.14	53.46
MW-33D-295	Confined LPA	178.3	117.03	61.27	133.14	45.16	124.36	53.94	123.60	54.70	123.83	54.47	127.34	50.96	125.69	52.61
MW-34D	Confined LPA	183.9	NM	-	NM	-	NM	-	NM	-	132.70	51.21	136.42	47.49	131.76	52.15
MW-35D	Confined LPA	177.8	117.28	60.52	133.55	44.25	125.59	52.21	124.02	53.78	124.27	53.53	128.19	49.61	123.64	54.16
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-413	Patuxent	153.1	NM	-	NM	-	NM	-	NM	-	138.10	15.03	143.75	9.38	140.62	12.51
MW-36D	Patuxent	158.7	NM	-	NM	-	NM	-	NM	-	141.75	16.96	146.32	12.39	143.85	14.86

Notes:

LPA = Lower Patapsco Aquifer

NM = Not Measured

TOC = Top of Casing

* Well abandoned in August 2019

Table 2

**Historical Groundwater Elevation Data - Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Aquifer/Zone	TOC Elevation	2/19/2019		5/22/2019		8/6/2019		11/20/2019		2/12/2020		5/14/2020	
			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	Depth to Water	Groundwater Elevation
MW-25S *	Unconfined LPA	130.6	11.75	118.85	NM	-	-	-	-	-	-	-	-	-
MW-28S *	Unconfined LPA	150.5	23.30	127.20	NM	-	-	-	-	-	-	-	-	-
MW-45	Unconfined LPA	126.7	11.98	114.74	11.75	114.97	NM	-	14.55	112.17	NM	-	NM	-
MW-24D	Confined LPA	129.1	48.92	80.18	49.67	79.43	52.37	76.73	51.12	77.98	50.10	79.00	48.80	80.30
MW-25-130	Confined LPA	130.5	54.96	75.54	56.23	74.27	60.79	69.71	59.94	70.56	55.55	74.95	54.95	75.55
MW-25-192	Confined LPA	130.5	54.20	76.30	55.45	75.05	60.37	70.13	59.02	71.48	54.70	75.80	54.23	76.27
MW-28D	Confined LPA	150.5	84.78	65.72	86.96	63.54	94.24	56.26	91.37	59.13	85.00	65.50	84.36	66.14
MW-29D	Confined LPA	131.9	60.64	71.28	62.36	69.56	67.20	64.72	67.10	64.82	61.28	70.64	60.61	71.31
MW-30D-273	Confined LPA	153.5	93.10	60.44	95.74	57.80	104.75	48.79	101.12	52.42	93.29	60.25	92.60	60.94
MW-31D	Confined LPA	162.5	102.47	60.03	104.91	57.59	113.35	49.15	110.14	52.36	102.73	59.77	NM	-
MW-32D	Confined LPA	156.1	93.79	62.35	97.02	59.12	99.43	56.71	101.56	54.58	92.35	63.79	94.31	61.83
MW-33D-235	Confined LPA	178.6	119.35	59.25	121.72	56.88	132.76	45.84	127.87	50.73	119.72	58.88	119.10	59.50
MW-33D-295	Confined LPA	178.3	119.10	59.20	NM	NA	131.14	47.16	127.65	50.65	119.54	58.76	118.84	59.46
MW-34D	Confined LPA	183.9	127.40	56.51	129.93	53.98	141.48	42.43	136.62	47.29	127.75	56.16	127.01	56.90
MW-35D	Confined LPA	177.8	119.18	58.62	121.65	56.15	127.51	50.29	129.89	47.91	119.68	58.12	119.06	58.74
MW-46D	Confined LPA	124.8	NM	-	35.47	89.30	38.40	86.37	37.90	86.87	36.13	88.64	35.73	89.04
MW-30D-413	Patuxent	153.1	130.73	22.40	137.25	15.88	145.27	7.86	143.64	9.49	128.12	25.01	127.25	25.88
MW-36D	Patuxent	158.7	134.83	23.88	141.30	17.41	147.65	11.06	146.75	11.96	132.11	26.60	131.08	27.63

Notes:

LPA = Lower Patapsco Aquifer

NM = Not Measured

TOC = Top of Casing

* Well abandoned in August 2019

Table 2

**Historical Groundwater Elevation Data - Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Aquifer/Zone	TOC Elevation	11/23/2020		5/10/2021		11/15/2021		6/27/2022		11/20/2022	
			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-25S *	Unconfined LPA	130.6	-	-	-	-	-	-	-	-	-	-
MW-28S *	Unconfined LPA	150.5	-	-	-	-	-	-	-	-	-	-
MW-45	Unconfined LPA	126.7	13.61	113.11	12.69	114.03	13.35	113.37	12.91	113.81	13.54	113.2
MW-24D	Confined LPA	129.1	53.02	76.08	50.01	79.09	49.40	79.70	51.06	78.04	53.11	75.99
MW-25-130	Confined LPA	130.5	60.50	70.00	56.11	74.39	NM	NA	60.22	70.28	60.00	70.50
MW-25-192	Confined LPA	130.5	59.50	71.00	55.32	75.18	NM	NA	59.12	71.38	59.10	71.40
MW-28D	Confined LPA	150.5	92.87	57.63	86.34	64.16	89.34	61.16	93.51	56.99	90.81	59.69
MW-29D	Confined LPA	131.9	67.75	64.17	62.15	69.77	64.82	67.10	68.45	63.47	66.70	65.22
MW-30D-273	Confined LPA	153.5	103.09	50.45	94.95	58.59	99.70	53.84	104.25	49.29	100.23	53.31
MW-31D	Confined LPA	162.5	113.30	49.20	104.32	58.18	108.09	54.41	114.2	48.30	109.24	53.26
MW-32D	Confined LPA	156.1	103.76	52.38	95.58	60.56	99.72	56.42	104.98	51.16	100.23	55.91
MW-33D-235	Confined LPA	178.6	NM	-	121.30	57.30	125.35	53.25	132.13	46.47	126.56	52.04
MW-33D-295	Confined LPA	178.3	130.21	48.09	121.08	57.22	125.15	53.15	131.85	46.45	126.29	52.01
MW-34D	Confined LPA	183.9	139.08	44.83	129.41	54.50	133.82	50.09	141.12	42.79	134.82	49.09
MW-35D	Confined LPA	177.8	129.67	48.13	121.20	56.60	126.19	51.61	132.35	45.45	126.60	51.20
MW-46D	Confined LPA	124.8	37.72	87.05	35.95	88.82	35.62	89.15	37.13	87.64	38.38	86.39
MW-30D-413	Patuxent	153.1	142.22	10.91	134.60	18.53	140.69	12.44	145.4	7.7	141.52	11.6
MW-36D	Patuxent	158.7	145.25	13.46	137.95	20.76	143.70	15.01	148.06	10.7	145.05	13.7

Notes:

LPA = Lower Patapsco Aquifer

NM = Not Measured

TOC = Top of Casing

* Well abandoned in August 2019

Table 3

**Hydrasleeve Depth Intervals
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Well Construction		Hydrasleeve Placement	
	Well Diameter	Screened Interval (ft-bgs)	HS Size	HS Interval Placement (ft-bgs)
<i>Shallow (Unconfined) Lower Patapsco Aquifer</i>				
MW-45	2	28 - 38	600 mL	32 - 34.5
<i>Deep (Confined) Lower Patapsco Aquifer</i>				
MW-24D	2	118 - 128	600 mL	122 - 124.5
MW-25D-130	2	120 - 130	600 mL	125 - 127.5
MW-25D-192	2	182 - 192	600 mL	185 - 187.5
MW-28D	2	200 - 210	600 mL	205 - 207.5
MW-29D	2	141 - 151	600 mL	146 - 148.5
MW-30D-273	2	263 - 273	600 mL	267 - 269.5
MW-31D	2	270 - 280	600 mL	275 - 277.5
MW-32D	2	226 - 236	600 mL	233 - 235.5
MW-33D-236	2	226 - 236	600 mL	230 - 232.5
MW-33D-295	2	285 - 295	600 mL	290 - 292.5
MW-34D	2	375 - 385	600 mL	379 - 381.5
MW-35D	2	288 - 298	600 mL	293 - 295.5
MW-46D	2	80 - 90	600 mL	84 - 86.5
<i>Patuxent Aquifer</i>				
MW-30D-413	2	403 - 413	600 mL	407 - 409.5
MW-36D	2	350 - 360	600 mL	357 - 359.5

ft-bgs = feet below ground surface
 HS = hydrasleeve
 mL = milliliters

Table 4

**2022 Field Parameter Measurements
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland (a)**

Well ID	Sample Date	Temperature (°C)	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)
Unconfined Lower Patapsco Aquifer Wells					
MW-45	11/15/2022	11.48	4.79	0.392	>1000
Confined Lower Patapsco Aquifer Wells					
MW-24D	6/27/2022	NM	NM	NM	NM
	11/15/2022	NM	NM	NM	NM
MW-25D-130	6/27/2022	NM	NM	NM	NM
	11/15/2022	NM	NM	NM	NM
MW-25D-192	6/27/2022	NM	NM	NM	NM
	11/15/2022	NM	NM	NM	NM
MW-28D	6/27/2022	NM	NM	NM	NM
	11/15/2022	14.54	5.51	0.062	66.7
MW-29D	6/27/2022	NM	NM	NM	NM
	11/15/2022	10.91	4.70	0.227	>1000
MW-30D-273	6/27/2022	NM	NM	NM	NM
	11/15/2022	11.13	4.56	0.020	173
MW-31D	6/27/2022	NM	NM	NM	NM
	11/15/2022	11.33	4.66	0.071	749
MW-32D	6/27/2022	NM	NM	NM	NM
	11/15/2022	12.82	5.19	0.112	230
MW-33D-235	6/27/2022	NM	NM	NM	NM
	11/15/2022	10.56	4.05	0.022	52.8
MW-33D-295	6/27/2022	NM	NM	NM	NM
	11/15/2022	11.05	4.00	0.220	81.2
MW-34D	6/27/2022	NM	NM	NM	NM
	11/15/2022	13.04	5.52	0.120	829
MW-35D	6/27/2022	NM	NM	NM	NM
	11/15/2022	14.05	3.01	0.138	1.6
MW-46D	6/27/2022	NM	NM	NM	NM
	11/14/2022	10.76	4.94	NM	282
Patuxent Aquifer Wells					
MW-36D	6/27/2022	NM	NM	NM	NM
	11/15/2022	12.65	5.34	0.018	40.6
MW-30D-413	6/27/2022	NM	NM	NM	NM
	11/15/2022	11.35	4.04	0.040	91.5

a/ °C = degrees Celsius; SU = standard units; mS/cm = milli siemens per centimeter;
 NTU = Nephelometric Turbidity Unit; NR = not recorded;
 NM = Not measured due to insufficient water in HydraSleeve to collect readings.

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
Shallow Zone Lower Patapsco Wells (b)											
MW-25 (c)	3/19/2015	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
	6/24/2015	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
	9/23/2015	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
	1/6/2016	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
	3/23/2016	1.0 U	1.0 U	1.0 U	1.5	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/20/2016	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
	9/8/2016	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
	12/8/2016	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
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	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
	8/31/2017	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
	11/14/2017	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	11.7	1.0 U	1.0 U	1.0 U
	2/13/2018	5.0 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
	5/30/2018	5.0 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
MW-28 (c)	3/17/2015	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
	6/23/2015	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
	9/22/2015	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
	1/5/2016	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
	3/22/2016	1.0 U	1.0 U	1.0 U	6.2	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	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
	9/7/2016	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
	12/8/2016	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
	2/21/2017	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
	5/2/2017	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
	8/31/2017	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
	11/14/2017	5.0 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
	2/14/2018	5.0 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
	5/30/2018	5.0 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
MW-45	3/24/2017	1.0 U	1.0 U	1.9	1.0 U	2.3	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/28/2018	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	12/8/2020	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
Deep Zone Lower Patapsco Wells											
MW-24D	3/22/2016	12.5 U	88.0	15.7	1,780	12.5 U	561	39.4	38.6	12.5 U	12.5 U
	12/8/2016	5.0 U	36.1	5.2	701	5.0 U	192	10.0 U	9.0	5.0 U	5.0 U
	5/2/2017	5.0 U	40.4	5.6	830	5.0 U	216	10.0 U	10.2	5.0 U	5.0 U
	11/14/2017	5.0 U	28.1	3.4	803	2.3	212	11.7	10.5	0.5 J	5.9
	5/30/2018	4.0 U	26.6	4.0 U	529	4.0 U	187	8.0 U	5.5	4.0 U	4.0 U
	11/7/2018	5.0 U	29.8	5.0 U	560	5.0 U	2.0 U	10.0 U	5.0 U	5.0 U	5.0 U
	5/22/2019	10.0 U	66.2	10.0 U	1,190	10.0 U	359	50.0 U	18	10.0 U	10.0 U
	11/19/2019	5.0 U	54.5	6.6	868	5.0 U	155	25.0 U	10	5.0 U	6.0 U
	5/12/2020	2.5 U	25	3.3	402	5.0 U	139	25.0 U	3.7	5.0 U	3.2
	11/23/2020	4 U	73.5	4.0 U	505	4.0 U	208	20.0 U	4.4	4.0 U	4.0 U
	5/10/2021	6.2	151.0	6.3	788	7.2	299	25.0 U	10.9	5.0 U	5.0 U
	11/15/2021	10.0 U	142.0	10.0 U	1,300	10.0 U	475	25.0 U	16.1	5.0 U	5.0 U
	6/27/2022	3.6	142.0	7.4	1,490	6.9	165	1.0 U	18.5	1.0	8.6
	11/21/2022	2.8	114.0	7.5	1,020	5.5	148	1.0 U	15.3	1.2	7.7
MW-25D-130	3/19/2015	10.0 U	38.6	10.8	854	10.0 U	446	200 U	8,930	100 U	100 U
	6/24/2015	1.0 U	37.1	8.9	1,030	4.6	303	2.0 U	46.3	1.2	6.8
	9/23/2015	10.0 U	29.7	10.0 U	697	10.0 U	295	20.0 U	32.3	10.0 U	14.2
	1/7/2016	5.0 U	33.4	9.7	800	5.0 U	398	10.0 U	5.0 U	5.0 U	6.1
	3/23/2016	5.0 U	24.5	8.0	676	5.0 U	302	10.0 U	26.2	5.0 U	5.0
	7/19/2016	10.0 U	39.3	10.2	1,090	4.9 J	367	14.3 J	37.0	10.0 U	6.5 J
	9/9/2016	5.0 U	27.9	6.4	661	5.0 U	241	12.0	25.0	5.0 U	5.0 U
	12/8/2016	1.0 U	6.7	1.5	171	1.0 U	13.6	2.0 U	6.9	1.0 U	1.0 U
	2/21/2017	1.0 U	7.2	1.7	194	1.0 U	69.1	2.0 U	7.0	1.0 U	1.2
	5/2/2017	2.0 U	6.5	2.0 U	174	2.0 U	61.0	4.0 U	5.0	2.0 U	2.0 U
	8/31/2017	2.0 U	7.4	1.7	193	2.0 U	57.9	4.0 U	6.9	2.0 U	2.0 U
	11/14/2017	2.0 U	5.1	1.3	151	0.57 J	58.5	5.0 U	6.4	1.0 U	1.1
	2/13/2018	2.0 U	6.3	2.0 U	154	2.0 U	67.1	5.0 U	6.4	1.0 U	1.0 U
	5/30/2018	2.0 U	5.0	1.4	144	2.0 U	53.9	5.0 U	5.3	1.0 U	1.0 U
	11/8/2018	2.0 U	4.4	1.1	109	2.0 U	40.2	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	3.7	1.0 U	96.2	1.0 U	38.4	5.0 U	4.2	1.0 U	1.0 U
	11/19/2019	1.0 U	2.7	1.0 U	62.1	1.0 U	31.0	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	3.3	1.0 U	69.1	1.0 U	32.6	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	3.3	1.0 U	76.0	1.0 U	32.4	5.0 U	4.9	1.0 U	1.0 U
	5/10/2021	1.0 U	3.0	1.0 U	50.8	1.0 U	30.2	5.0 U	3.1	1.0 U	1.0 U
12/27/2021	1.0 U	3.0	1.0 U	45.5	1.0 U	29.1	5.0 U	3.3	1.0 U	1.0 U	
6/27/2022	1.0 U	4.2	1.0 U	65.6	1.0 U	15.6	1.0 U	5.0	1.0 U	1.0 U	
11/21/2022	1.0 U	5.5	1.0 U	80.2	1.0 U	16.1	1.0 U	5.6	1.0 U	1.0 U	
Duplicate	11/21/2022	1.0 U	5.3	1.0 U	76.2	1.0 U	19.1	1.0 U	5.6	1.0 U	1.0 U

Table 5

**Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-25D-192	3/19/2015	1.0 U	11.7	1.0 U	53.0	1.0 U	49.4	2.0 U	13.7	1.0 U	1.0 U
	6/25/2015	1.0 U	11.9	1.0 U	59.4	1.0 U	39.8	2.0 U	14.2	1.0 U	1.0 U
	9/22/2015	1.0 U	13.9	1.0 U	51.4	1.0 U	45.0	2.0 U	12.9	1.0 U	1.3
	1/7/2016	1.0 U	11.7	1.0 U	47.2	1.0 U	41.7	2.0 U	12.5	1.0 U	1.0 U
	3/23/2016	1.0 U	10.3	1.0 U	43.3	1.0 U	42.2	2.0 U	11.3	1.0 U	1.0 U
	7/20/2016	1.0 U	11.7	0.73 J	54.9	1.0 U	54.4	2.0 U	11.1	1.0 U	1.0 U
	9/8/2016	1.0 U	12.9	1.0 U	56.8	1.0 U	39.3	2.0 U	12.6	1.0 U	1.0 U
	12/8/2016	1.0 U	16.1	1.0 U	64.6	1.0 U	51.3	2.0 U	13.3	1.0 U	1.0 U
	2/21/2017	1.0 U	14.0	1.0 U	63.3	1.0 U	52.1	2.0 U	11.6	1.0 U	1.0 U
	5/2/2017	1.0 U	16.9	1.0 U	81.0	1.0 U	53.1	2.0 U	13.5	1.0 U	1.0 U
	8/31/2017	1.0 U	15.7	1.0 U	62.5	1.0 U	44.3	2.0 U	13.1	1.0 U	1.0 U
	11/14/2017	5.0 U	13.6	0.67 J	67.2	1.0 U	56.7	5.0 U	13.6	1.0 U	1.0 U
	2/13/2018	5.0 U	13.7	1.0 U	69.2	1.0 U	42.7	5.0 U	11.0	1.0 U	1.0 U
	5/30/2018	5.0 U	10.8	1.0 U	58.3	1.0 U	50.8	5.0 U	7.2	1.0 U	1.0 U
	11/8/2018	5.0 U	13.7	1.0 U	61.0	1.0 U	49.3	5.0 U	9.8	1.0 U	1.0 U
	5/22/2019	1.0 U	11.8	1.0 U	51.7	1.0 U	36.7	5.0 U	8.5	1.0 U	1.0 U
	11/19/2019	1.0 U	12.6	1.0 U	53.2	1.0 U	41.1	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	12.8	1.0 U	58.0	1.0 U	41.1	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	11.3	1.0 U	46.9	1.0 U	41.5	5.0 U	5.8	1.0 U	1.0 U
	5/10/2021	1.0 U	6.5	1.0 U	28.3	1.0 U	22.6	5.0 U	3.2	1.0 U	1.0 U
12/27/2021	1.0 U	6.2	1.0 U	26.0	1.0 U	21.6	5.0 U	3.4	1.0 U	1.0 U	
6/27/2022	1.0 U	8.8	1.0 U	37.3	1.0 U	11.6	1.0 U	4.7	1.0 U	1.0 U	
11/21/2022	1.0 U	7.3	1.0 U	29.1	1.0 U	10.2	1.0 U	3.7	1.0 U	1.0 U	

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-28D	3/17/2015	1.0 U	1.0 U	1.0 U	10.6	1.0 U	5.0	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	12.8	1.0 U	4.5	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	1.0 U	14.3	1.0 U	4.4	2.0 U	1.0 U	1.0 U	1.0 U
	1/5/2016	1.0 U	1.0 U	1.0 U	11.5	1.0 U	5.5	2.0 U	1.0 U	1.0 U	1.0 U
	3/23/2016	1.0 U	1.0 U	1.0 U	9.1	1.0 U	4.0	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	1.0 U	0.25 J	10.1	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	12.0	1.0 U	5.0	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	6.3	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	4.6	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	5.8	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	5.0	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	5.5	1.0 U	3.5	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	5.0 U	1.0 U	1.0 U	4.3	1.0 U	2.8	5.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	5.0 U	1.0 U	1.0 U	6.1	1.0 U	2.4	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	6.9	1.0 U	2.3	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	5.2	1.0 U	3.5	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	6.1	1.0 U	3.9	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	4.0	1.0 U	3.4	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	7.6	1.0 U	4.2	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	10.0	1.0 U	4.3	5.0 U	1.0 U	1.0 U	1.0 U
11/15/2021	1.0 U	1.0 U	1.0 U	8.1	1.0 U	5.1	5.0 U	1.0 U	1.0 U	1.0 U	
6/27/2022	1.0 U	1.0 U	1.0 U	4.0	1.0 U	2.1	1.0 U	1.0 U	1.0 U	1.0 U	
11/21/2022	1.0 U	1.0 U	1.0 U	6.2	1.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U	
MW-29D	5/21/2018	5.0 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
	8/23/2018	5.0 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
	11/8/2018	5.0 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
	2/19/2019	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
	5/22/2019	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
	11/20/2019	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
	5/14/2020	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
	11/23/2020	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
	5/10/2021	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
	11/15/2021	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
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U
11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-30D-273	5/31/2018	5.0 U	1.0 U	1.0 U	27.4	1.0 U	16.4	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	5.0 U	1.0	1.0 U	40.7	1.0 U	24.5	5.0 U	1.7	1.0 U	1.0 U
	11/8/2018	5.0 U	1.2	1.0 U	44.0	1.0 U	22.2	5.0 U	2.1	1.0 U	1.0 U
	2/19/2019	1.0 U	1.1	1.0 U	47.2	1.0 U	23.1	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.1	1.0 U	44.2	1.0 U	22.7	5.0 U	2.0	1.0 U	1.0 U
	11/20/2019	1.0 U	1.1	1.0 U	43.3	1.0 U	22.8	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0	1.0 U	42.7	1.0 U	20.9	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0	1.0 U	39.5	1.0 U	19.5	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0	1.0 U	36.9	1.0 U	18.2	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0	1.0 U	34.1	1.0 U	16.6	5.0 U	1.4	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	34.5	1.0 U	7.5	1.0 U	1.3	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	31.3	1.0 U	7.0	1.0 U	1.2	1.0 U	1.0 U
	MW-31D	3/17/2015	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
6/24/2015		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
9/22/2015		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
1/6/2016		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
3/21/2016		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
7/19/2016		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
9/6/2016		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
12/8/2016		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
2/21/2017		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
5/2/2017		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
8/31/2017		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
11/14/2017		5.0 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
2/14/2018		5.0 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
5/31/2018		5.0 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
11/8/2018		5.0 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
5/22/2019		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
11/20/2019		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
6/2/2020		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
11/23/2020		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
5/10/2021		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
11/15/2021	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	
6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U	
11/21/2022	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-32D	5/31/2018	5.0 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
	8/23/2018	5.0 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
	11/8/2018	5.0 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
	2/19/2019	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
	5/22/2019	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
	11/20/2019	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
	5/14/2020	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
	11/23/2020	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
	5/10/2021	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
	11/15/2021	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
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.2 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	MW-33D-235	3/18/2015	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
6/23/2015		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
9/21/2015		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
1/4/2016		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
3/21/2016		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
7/18/2016		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
9/7/2016		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
12/8/2016		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
2/21/2017		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
5/2/2017		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
8/31/2017		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
11/14/2017		5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.3	12.0	1.0 U	1.0 U	1.0 U
2/13/2018		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
5/31/2018		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
11/8/2018		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
5/22/2019		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
11/20/2019		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
5/14/2020		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
11/23/2020		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
5/10/2021		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
11/15/2021	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	
6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U	1.0 U	
11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-33D-295	3/18/2015	1.0 U	1.0 U	1.0 U	4.6	1.0 U	8.0	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	3.3	1.0 U	6.8	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	1.0 U	4.8	1.0 U	6.8	2.0 U	1.0 U	1.0 U	1.0 U
	1/4/2016	1.0 U	1.0 U	1.0 U	3.7	1.0 U	7.6	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	1.0 U	3.9	1.0 U	7.8	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	1.0 U	0.36 J	3.2	1.0 U	5.1	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	3.8	1.0 U	7.4	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	5.4	1.0 U	7.4	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	4.0	1.0 U	6.8	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	5.3	1.0 U	7.4	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	5.6	1.0 U	6.3	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	3.4	1.0 U	9.7	11.5	0.49 J	1.0 U	1.0 U
	2/13/2018	5.0 U	1.0 U	1.0 U	4.6	1.0 U	6.9	2.0 U	0.49 J	1.0 U	1.0 U
	5/31/2018	5.0 U	1.0 U	1.0 U	4.6	1.0 U	6.9	2.0 U	0.49 J	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	4.2	1.0 U	6.1	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	4.5	1.0 U	6.1	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	3.7	1.0 U	6.3	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	4.4	1.0 U	6.0	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	3.6	1.0 U	6.0	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	4.4	1.0 U	5.6	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	4.2	1.0 U	6.1	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	5.1	1.0 U	3.0	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	6.0	1.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U
MW-34D	5/31/2018	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
	8/23/2018	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
	11/8/2018	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
	2/19/2019	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
	5/22/2019	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
	11/20/2019	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
	5/14/2020	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
	11/23/2020	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
	5/10/2021	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
	11/15/2021	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
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U
11/21/2022	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	

Table 5

**Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-35D	3/18/2015	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
	6/22/2015	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
	9/21/2015	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
	1/6/2016	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
	4/15/2016	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
	7/18/2016	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
	9/6/2016	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
	12/8/2016	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
	2/21/2017	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
	5/2/2017	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
	8/31/2017	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
	11/14/2017	5.0 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
	2/14/2018	5.0 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
	5/31/2018	5.0 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
	11/8/2018	5.0 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
	5/22/2019	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
	11/20/2019	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
	5/14/2020	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
	11/23/2020	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
	5/10/2021	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
11/15/2021	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	
6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.16 U	1.0 U	1.0 U	1.0 U	
11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
MW-46D	5/30/2018	1.0 U	13.7	1.0 U	29.4	1.0 U	73.5	2.0 U	1.2	1.0 U	1.0 U
	11/7/2018	1.0 U	22.1	1.2	99.6	1.0 U	96.7	2.0 U	7.7	1.0 U	1.0 U
	5/21/2019	1.0 U	26.1	1.0	125	1.0 U	88.0	5.0 U	10.2	1.0 U	1.0 U
	11/19/2019	1.0 U	23.4	1.4	114	1.0	96.3	5.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	20.7	1.4	98	1.0	63.0	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	18.4	1.0 U	124	1.0 U	29.8	5.0 U	6.4	1.0 U	1.0 U
	5/9/2021	1.0 U	25.7	1.5	116	1.0 U	99.3	5.0 U	7.8	1.0 U	1.0 U
	11/15/2021	1.0 U	19.9	1.0 U	87	1.0 U	79.9	5.0 U	4.8	1.0 U	1.0 U
	6/27/2022	1.0 U	20.7	1.0 U	92	1.0 U	23.4	5.0 U	5.7	1.0 U	1.0 U
	11/21/2022	1.0 U	15.7	1.0 U	74.9	1.0 U	40.1	1.0 U	3.6	1.0 U	1.0 U

Table 5

**Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland**

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
Confined Patuxent Wells											
MW-30D-413	5/31/2018	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
	8/23/2018	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
	11/8/2018	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
	2/19/2019	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
	5/22/2019	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
	11/20/2019	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
	5/14/2020	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
	11/23/2020	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
	5/10/2021	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
	11/15/2021	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
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.10 U	1.0 U	1.0 U	1.0 U	1.0 U
11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
MW-36D	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
	8/23/2018	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
	11/8/2018	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
	2/19/2019	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
	5/22/2019	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
	11/20/2019	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
	5/14/2020	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
	11/23/2020	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
	5/10/2021	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
	11/15/2021	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
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.17 U	1.0 U	1.0 U	1.0 U	1.0 U
11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	

(1) MDE GW Quality Standard changed from 90 µg/L to 2.8 µg/L in October 2018

a/ U = not detected above the method detection limit; J = estimated concentration between the reporting limit and method detection limit.

Bolded values indicate an exceedence of the Groundwater Quality Standards

Dashed line marks change from quarterly to semi-annual sampling frequency at the well.

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

NS = well not sampled

b/ Wells screened in this portion of the Lower Patuxent aquifer were removed from the monitoring program after the May 2018 sampling event.

c/ Well decommissioned in August 2019

APPENDIX

A 2022 LABORATORY ANALYTICAL REPORTS



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | 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 Offsi

Workorder 3250322

Report ID 185101 on 8/1/2022

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.

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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>
3250322001	MW-36D	Ground Water	06/27/2022 11:50	06/27/2022 19:00	CBC	Collected By Client
3250322002	MW-25D-130	Ground Water	06/27/2022 14:30	06/27/2022 19:00	CBC	Collected By Client
3250322003	MW-25D-190	Ground Water	06/27/2022 14:10	06/27/2022 19:00	CBC	Collected By Client
3250322004	MW-45	Ground Water	06/27/2022 13:10	06/27/2022 19:00	CBC	Collected By Client
3250322005	MW-24D	Ground Water	06/27/2022 13:25	06/27/2022 19:00	CBC	Collected By Client
3250322006	DUP-062722	Ground Water	06/27/2022 12:00	06/27/2022 19:00	CBC	Collected By Client
3250322007	MW-35D	Ground Water	06/27/2022 08:55	06/27/2022 19:00	CBC	Collected By Client
3250322008	MW-34D	Ground Water	06/27/2022 09:15	06/27/2022 19:00	CBC	Collected By Client
3250322009	MW-31D	Ground Water	06/27/2022 09:55	06/27/2022 19:00	CBC	Collected By Client
3250322010	MW-33D-235	Ground Water	06/27/2022 09:30	06/27/2022 19:00	CBC	Collected By Client
3250322011	MW-33D-295	Ground Water	06/27/2022 09:40	06/27/2022 19:00	CBC	Collected By Client
3250322012	MW-30D-273	Ground Water	06/27/2022 10:30	06/27/2022 19:00	CBC	Collected By Client
3250322013	MW-30D-413	Ground Water	06/27/2022 10:20	06/27/2022 19:00	CBC	Collected By Client
3250322014	MW-29D	Ground Water	06/27/2022 10:45	06/27/2022 19:00	CBC	Collected By Client
3250322015	MW-32D	Ground Water	06/27/2022 11:00	06/27/2022 19:00	CBC	Collected By Client
3250322016	MW-28D	Ground Water	06/27/2022 11:35	06/27/2022 19:00	CBC	Collected By Client
3250322017	Trip Blank	Ground Water	06/27/2022 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

P1 This certificate of analysis was modified based on the email request from Eric Johnson 08/01/22. SJS 08/01/22
 We are going to need ALS to make a correction to the attached lab report for samples from the Former Kop-Flex Facility Site. This correction involves changing the Client Sample ID "MW-45D" to "MW-45". This was an error on our part as the incorrect sample ID was indicated on the chain-of-custody form provided with the samples. Our apologies for not catching this error before the laboratory report was issued for the samples.

Please let us know when we will be able to receive the revised report. Thanks for your help.

Sample Notations

Lab ID	Sample ID
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Result Notations

Notation Ref.	
1	The QC sample type MS for method SW846 8270E SIM was outside the control limits for the analyte 1,4-Dioxane. The % Recovery was reported as -71.2 and the control limits were 22 to 75.
2	The QC sample type MSD for method SW846 8260D was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 121 and the control limits were 73 to 117.
3	The QC sample type MS for method SW846 8260D was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 125 and the control limits were 73 to 117.



Detected Results Summary

Client Sample ID **MW-25D-130** Collected **06/27/2022 14:30**
Lab Sample ID **3250322002** 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>
SEMIVOLATILE SIM					
1,4-Dioxane	15.6	ug/L	2.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	5.0	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	4.2	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	65.6	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	MW-25D-190	Collected	06/27/2022 14:10
Lab Sample ID	3250322003	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>
SEMIVOLATILE SIM					
1,4-Dioxane	11.6	ug/L	0.10	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	4.7	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	8.8	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	37.3	ug/L	1.0	SW846 8260D	#
Methyl t-Butyl Ether	1.1	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	MW-24D	Collected	06/27/2022 13:25
Lab Sample ID	3250322005	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>
SEMIVOLATILE SIM					
1,4-Dioxane	165	ug/L	2.9	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	18.5	ug/L	1.0	SW846 8260D	#
1,1,2-Trichloroethane	1.0	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	142	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	1490	ug/L	20.0	SW846 8260D	#
1,2-Dichloroethane	7.4	ug/L	1.0	SW846 8260D	#
Chloroethane	3.6	ug/L	1.0	SW846 8260D	#
cis-1,2-Dichloroethene	6.9	ug/L	1.0	SW846 8260D	#
Tetrachloroethene	1.5	ug/L	1.0	SW846 8260D	#
Trichloroethene	8.6	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	DUP-062722	Collected	06/27/2022 12:00
Lab Sample ID	3250322006	Lab Receipt	06/27/2022 19:00

Compound	Result	Units	RDL	Method	Flag
SEMIVOLATILE SIM					
1,4-Dioxane	13.4	ug/L	0.40	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	4.8	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	4.1	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	63.9	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	MW-33D-295	Collected	06/27/2022 09:40
Lab Sample ID	3250322011	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>
SEMIVOLATILE SIM					
1,4-Dioxane	3.0	ug/L	0.14	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1-Dichloroethene	5.1	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID **MW-30D-273** Collected **06/27/2022 10:30**
Lab Sample ID **3250322012** 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>
SEMIVOLATILE SIM					
1,4-Dioxane	7.5	ug/L	0.17	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	1.3	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	34.5	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	MW-28D	Collected	06/27/2022 11:35
Lab Sample ID	3250322016	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>
SEMIVOLATILE SIM					
1,4-Dioxane	2.1	ug/L	0.17	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1-Dichloroethene	4.0	ug/L	1.0	SW846 8260D	#



Results

Client Sample ID	MW-36D	Collected	06/27/2022 11:50
Lab Sample ID	3250322001	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.17 U	U,P1	ug/L	0.17	SW846 8270E SIM	1	07/05/2022 11:45	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	58.5%	29 – 112	07/05/2022 11:45	
Fluoranthene-d10	93951-69-0	89.2%	45 – 130	07/05/2022 11:45	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C



Results

Client Sample ID	MW-36D	Collected	06/27/2022 11:50
Lab Sample ID	3250322001	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:30	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:30	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.1%	62 – 133	07/07/2022 03:30	
4-Bromofluorobenzene	460-00-4	98%	79 – 114	07/07/2022 03:30	
Dibromofluoromethane	1868-53-7	92.7%	78 – 116	07/07/2022 03:30	
Toluene-d8	2037-26-5	96.2%	76 – 127	07/07/2022 03:30	



Results

Client Sample ID	MW-25D-130	Collected	06/27/2022 14:30
Lab Sample ID	3250322002	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	15.6	P1	ug/L	2.0	SW846 8270E SIM	20	07/06/2022 14:52	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	0*%	29 – 112	07/06/2022 14:52	
2-Methylnaphthalene-d10	7297-45-2	64.9%	29 – 112	07/05/2022 12:13	
Fluoranthene-d10	93951-69-0	0*%	45 – 130	07/06/2022 14:52	
Fluoranthene-d10	93951-69-0	87.1%	45 – 130	07/05/2022 12:13	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,1,1-Trichloroethane	5.0	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,1-Dichloroethane	4.2	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,1-Dichloroethene	65.6	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C



Results

Client Sample ID	MW-25D-130	Collected	06/27/2022 14:30
Lab Sample ID	3250322002	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 03:52	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 03:52	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	84%	62 – 133	07/07/2022 03:52	
4-Bromofluorobenzene	460-00-4	96.2%	79 – 114	07/07/2022 03:52	
Dibromofluoromethane	1868-53-7	89.3%	78 – 116	07/07/2022 03:52	
Toluene-d8	2037-26-5	97.8%	76 – 127	07/07/2022 03:52	



Results

Client Sample ID	MW-25D-190	Collected	06/27/2022 14:10
Lab Sample ID	3250322003	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	11.6	1,P1	ug/L	0.10	SW846 8270E SIM	1	07/05/2022 12:40	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	72.7%	29 – 112	07/05/2022 12:40	
Fluoranthene-d10	93951-69-0	90.5%	45 – 130	07/05/2022 12:40	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,1,1-Trichloroethane	4.7	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,1-Dichloroethane	8.8	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,1-Dichloroethene	37.3	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C



Results

Client Sample ID	MW-25D-190	Collected	06/27/2022 14:10
Lab Sample ID	3250322003	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Methyl t-Butyl Ether	1.1	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:15	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:15	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	84.1%	62 – 133	07/07/2022 04:15	
4-Bromofluorobenzene	460-00-4	92.6%	79 – 114	07/07/2022 04:15	
Dibromofluoromethane	1868-53-7	87.7%	78 – 116	07/07/2022 04:15	
Toluene-d8	2037-26-5	98.8%	76 – 127	07/07/2022 04:15	



Results

Client Sample ID	MW-45	Collected	06/27/2022 13:10
Lab Sample ID	3250322004	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,P1	ug/L	0.10	SW846 8270E SIM	1	07/05/2022 13:34	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	75.3%	29 – 112	07/05/2022 13:34	
Fluoranthene-d10	93951-69-0	86.7%	45 – 130	07/05/2022 13:34	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C



Results

Client Sample ID	MW-45	Collected	06/27/2022 13:10
Lab Sample ID	3250322004	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:37	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:37	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	84%	62 – 133	07/07/2022 04:37	
4-Bromofluorobenzene	460-00-4	95.1%	79 – 114	07/07/2022 04:37	
Dibromofluoromethane	1868-53-7	87.2%	78 – 116	07/07/2022 04:37	
Toluene-d8	2037-26-5	97.8%	76 – 127	07/07/2022 04:37	



Results

Client Sample ID	MW-24D	Collected	06/27/2022 13:25
Lab Sample ID	3250322005	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	165	P1	ug/L	2.9	SW846 8270E SIM	20	07/06/2022 15:22	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	0*%	29 – 112	07/06/2022 15:22	
2-Methylnaphthalene-d10	7297-45-2	63.6%	29 – 112	07/05/2022 14:01	
Fluoranthene-d10	93951-69-0	0*%	45 – 130	07/06/2022 15:22	
Fluoranthene-d10	93951-69-0	85.3%	45 – 130	07/05/2022 14:01	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,1,1-Trichloroethane	18.5	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,1,2-Trichloroethane	1.0	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,1-Dichloroethane	142	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,1-Dichloroethene	1490	P1	ug/L	20.0	SW846 8260D	20	07/09/2022 12:16	TMP	D
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2-Dichloroethane	7.4	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Chloroethane	3.6	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C



Results

Client Sample ID	MW-24D	Collected	06/27/2022 13:25
Lab Sample ID	3250322005	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
cis-1,2-Dichloroethene	6.9	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Tetrachloroethene	1.5	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Trichloroethene	8.6	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 04:59	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 04:59	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.2%	62 – 133	07/09/2022 12:16	
1,2-Dichloroethane-d4	17060-07-0	83.9%	62 – 133	07/07/2022 04:59	
4-Bromofluorobenzene	460-00-4	97%	79 – 114	07/09/2022 12:16	
4-Bromofluorobenzene	460-00-4	98.6%	79 – 114	07/07/2022 04:59	
Dibromofluoromethane	1868-53-7	93.8%	78 – 116	07/09/2022 12:16	
Dibromofluoromethane	1868-53-7	90%	78 – 116	07/07/2022 04:59	
Toluene-d8	2037-26-5	91.9%	76 – 127	07/09/2022 12:16	
Toluene-d8	2037-26-5	97.2%	76 – 127	07/07/2022 04:59	



Results

Client Sample ID	DUP-062722	Collected	06/27/2022 12:00
Lab Sample ID	3250322006	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	13.4	P1	ug/L	0.40	SW846 8270E SIM	4	07/06/2022 15:51	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	57.1%	29 – 112	07/06/2022 15:51	
2-Methylnaphthalene-d10	7297-45-2	59.7%	29 – 112	07/05/2022 14:29	
Fluoranthene-d10	93951-69-0	77.8%	45 – 130	07/06/2022 15:51	
Fluoranthene-d10	93951-69-0	77.5%	45 – 130	07/05/2022 14:29	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,1,1-Trichloroethane	4.8	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,1-Dichloroethane	4.1	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,1-Dichloroethene	63.9	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C



Results

Client Sample ID **DUP-062722** Collected **06/27/2022 12:00**
 Lab Sample ID **3250322006** 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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:21	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:21	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	81.2%	62 – 133	07/07/2022 05:21	
4-Bromofluorobenzene	460-00-4	95.3%	79 – 114	07/07/2022 05:21	
Dibromofluoromethane	1868-53-7	85.1%	78 – 116	07/07/2022 05:21	
Toluene-d8	2037-26-5	98.2%	76 – 127	07/07/2022 05:21	



Results

Client Sample ID	MW-35D	Collected	06/27/2022 08:55
Lab Sample ID	3250322007	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.16 U	U,P1	ug/L	0.16	SW846 8270E SIM	1	07/05/2022 14:56	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	67.7%	29 – 112	07/05/2022 14:56	
Fluoranthene-d10	93951-69-0	94.6%	45 – 130	07/05/2022 14:56	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C



Results

Client Sample ID	MW-35D	Collected	06/27/2022 08:55
Lab Sample ID	3250322007	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 05:44	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 05:44	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	83.8%	62 – 133	07/07/2022 05:44	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/07/2022 05:44	
Dibromofluoromethane	1868-53-7	87.8%	78 – 116	07/07/2022 05:44	
Toluene-d8	2037-26-5	98.5%	76 – 127	07/07/2022 05:44	



Results

Client Sample ID	MW-34D	Collected	06/27/2022 09:15
Lab Sample ID	3250322008	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,P1	ug/L	0.50	SW846 8270E SIM	1	07/05/2022 15:23	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	66.1%	29 – 112	07/05/2022 15:23	
Fluoranthene-d10	93951-69-0	85.4%	45 – 130	07/05/2022 15:23	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C



Results

Client Sample ID	MW-34D	Collected	06/27/2022 09:15
Lab Sample ID	3250322008	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:06	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:06	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.1%	62 – 133	07/07/2022 06:06	
4-Bromofluorobenzene	460-00-4	96%	79 – 114	07/07/2022 06:06	
Dibromofluoromethane	1868-53-7	90.9%	78 – 116	07/07/2022 06:06	
Toluene-d8	2037-26-5	93%	76 – 127	07/07/2022 06:06	



Results

Client Sample ID	MW-31D	Collected	06/27/2022 09:55
Lab Sample ID	3250322009	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.14 U	U,P1	ug/L	0.14	SW846 8270E SIM	1	07/05/2022 15:51	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	63.9%	29 – 112	07/05/2022 15:51	
Fluoranthene-d10	93951-69-0	83.5%	45 – 130	07/05/2022 15:51	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C



Results

Client Sample ID	MW-31D	Collected	06/27/2022 09:55
Lab Sample ID	3250322009	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:28	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:28	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.1%	62 – 133	07/07/2022 06:28	
4-Bromofluorobenzene	460-00-4	97.3%	79 – 114	07/07/2022 06:28	
Dibromofluoromethane	1868-53-7	91.2%	78 – 116	07/07/2022 06:28	
Toluene-d8	2037-26-5	94.1%	76 – 127	07/07/2022 06:28	



Results

Client Sample ID	MW-33D-235	Collected	06/27/2022 09:30
Lab Sample ID	3250322010	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,P1	ug/L	0.10	SW846 8270E SIM	1	07/05/2022 16:18	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	48.7%	29 – 112	07/05/2022 16:18	
Fluoranthene-d10	93951-69-0	73.5%	45 – 130	07/05/2022 16:18	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C



Results

Client Sample ID	MW-33D-235	Collected	06/27/2022 09:30
Lab Sample ID	3250322010	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 06:51	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 06:51	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	83.6%	62 – 133	07/07/2022 06:51	
4-Bromofluorobenzene	460-00-4	96.1%	79 – 114	07/07/2022 06:51	
Dibromofluoromethane	1868-53-7	87.1%	78 – 116	07/07/2022 06:51	
Toluene-d8	2037-26-5	99.3%	76 – 127	07/07/2022 06:51	



Results

Client Sample ID	MW-33D-295	Collected	06/27/2022 09:40
Lab Sample ID	3250322011	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	3.0	P1	ug/L	0.14	SW846 8270E SIM	1	07/05/2022 16:45	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	66.8%	29 – 112	07/05/2022 16:45	
Fluoranthene-d10	93951-69-0	93.8%	45 – 130	07/05/2022 16:45	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,1-Dichloroethene	5.1	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C



Results

Client Sample ID	MW-33D-295	Collected	06/27/2022 09:40
Lab Sample ID	3250322011	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:13	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:13	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.2%	62 – 133	07/07/2022 07:13	
4-Bromofluorobenzene	460-00-4	98%	79 – 114	07/07/2022 07:13	
Dibromofluoromethane	1868-53-7	93.3%	78 – 116	07/07/2022 07:13	
Toluene-d8	2037-26-5	94.1%	76 – 127	07/07/2022 07:13	



Results

Client Sample ID	MW-30D-273	Collected	06/27/2022 10:30
Lab Sample ID	3250322012	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	7.5	P1	ug/L	0.17	SW846 8270E SIM	1	07/05/2022 17:13	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	66.1%	29 – 112	07/05/2022 17:13	
Fluoranthene-d10	93951-69-0	95.6%	45 – 130	07/05/2022 17:13	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,1,1-Trichloroethane	1.3	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,1-Dichloroethene	34.5	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C



Results

Client Sample ID	MW-30D-273	Collected	06/27/2022 10:30
Lab Sample ID	3250322012	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:35	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:35	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.9%	62 – 133	07/07/2022 07:35	
4-Bromofluorobenzene	460-00-4	97.5%	79 – 114	07/07/2022 07:35	
Dibromofluoromethane	1868-53-7	91.7%	78 – 116	07/07/2022 07:35	
Toluene-d8	2037-26-5	97%	76 – 127	07/07/2022 07:35	



Results

Client Sample ID	MW-30D-413	Collected	06/27/2022 10:20
Lab Sample ID	3250322013	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,P1	ug/L	0.10	SW846 8270E SIM	1	07/05/2022 17:40	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	63.2%	29 – 112	07/05/2022 17:40	
Fluoranthene-d10	93951-69-0	87.2%	45 – 130	07/05/2022 17:40	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C



Results

Client Sample ID	MW-30D-413	Collected	06/27/2022 10:20
Lab Sample ID	3250322013	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 07:57	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 07:57	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.2%	62 – 133	07/07/2022 07:57	
4-Bromofluorobenzene	460-00-4	97.7%	79 – 114	07/07/2022 07:57	
Dibromofluoromethane	1868-53-7	91.2%	78 – 116	07/07/2022 07:57	
Toluene-d8	2037-26-5	93.8%	76 – 127	07/07/2022 07:57	



Results

Client Sample ID	MW-29D	Collected	06/27/2022 10:45
Lab Sample ID	3250322014	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,P1	ug/L	0.50	SW846 8270E SIM	1	07/05/2022 18:07	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	67.2%	29 – 112	07/05/2022 18:07	
Fluoranthene-d10	93951-69-0	82%	45 – 130	07/05/2022 18:07	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C



Results

Client Sample ID	MW-29D	Collected	06/27/2022 10:45
Lab Sample ID	3250322014	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:19	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:19	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92%	62 – 133	07/07/2022 08:19	
4-Bromofluorobenzene	460-00-4	96.7%	79 – 114	07/07/2022 08:19	
Dibromofluoromethane	1868-53-7	91.1%	78 – 116	07/07/2022 08:19	
Toluene-d8	2037-26-5	94.2%	76 – 127	07/07/2022 08:19	



Results

Client Sample ID	MW-32D	Collected	06/27/2022 11:00
Lab Sample ID	3250322015	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	0.15 U	U,P1	ug/L	0.15	SW846 8270E SIM	1	07/05/2022 18:35	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	64.9%	29 – 112	07/05/2022 18:35	
Fluoranthene-d10	93951-69-0	67.4%	45 – 130	07/05/2022 18:35	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C



Results

Client Sample ID	MW-32D	Collected	06/27/2022 11:00
Lab Sample ID	3250322015	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 08:42	PDK	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 08:42	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89.7%	62 – 133	07/07/2022 08:42	
4-Bromofluorobenzene	460-00-4	95.4%	79 – 114	07/07/2022 08:42	
Dibromofluoromethane	1868-53-7	90.3%	78 – 116	07/07/2022 08:42	
Toluene-d8	2037-26-5	96.7%	76 – 127	07/07/2022 08:42	



Results

Client Sample ID	MW-28D	Collected	06/27/2022 11:35
Lab Sample ID	3250322016	Lab Receipt	06/27/2022 19:00

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	2.1	P1	ug/L	0.17	SW846 8270E SIM	1	07/06/2022 11:35	GEC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	72.4%	29 – 112	07/06/2022 11:35	
Fluoranthene-d10	93951-69-0	85.6%	45 – 130	07/06/2022 11:35	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,1-Dichloroethene	4.0	P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Bromochloromethane	1.0 U	U,2,3,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C



Results

Client Sample ID	MW-28D	Collected	06/27/2022 11:35
Lab Sample ID	3250322016	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:27	TMP	C
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:27	TMP	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.2%	62 – 133	07/07/2022 14:27	
4-Bromofluorobenzene	460-00-4	109%	79 – 114	07/07/2022 14:27	
Dibromofluoromethane	1868-53-7	105%	78 – 116	07/07/2022 14:27	
Toluene-d8	2037-26-5	100%	76 – 127	07/07/2022 14:27	



Results

Client Sample ID	Trip Blank	Collected	06/27/2022 00:00
Lab Sample ID	3250322017	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A



Results

Client Sample ID	Trip Blank	Collected	06/27/2022 00:00
Lab Sample ID	3250322017	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,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	07/07/2022 14:04	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	07/07/2022 14:04	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.3%	62 – 133	07/07/2022 14:04	
4-Bromofluorobenzene	460-00-4	110%	79 – 114	07/07/2022 14:04	
Dibromofluoromethane	1868-53-7	106%	78 – 116	07/07/2022 14:04	
Toluene-d8	2037-26-5	99.2%	76 – 127	07/07/2022 14:04	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3250322001	MW-36D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322002	MW-25D-130	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322003	MW-25D-190	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322004	MW-45	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322005	MW-24D	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	
3250322006	DUP-062722	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322007	MW-35D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322008	MW-34D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322009	MW-31D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322010	MW-33D-235	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322011	MW-33D-295	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322012	MW-30D-273	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322013	MW-30D-413	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322014	MW-29D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322015	MW-32D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322016	MW-28D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3250322017	Trip Blank	SW846 8260D	N/A	



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM

QC Batch			
QC Batch	860435	Prep Method	SW846 3510C
Date	06/30/2022 16:35	Analysis Method	SW846 8270E SIM
Tech.	JH		

Associated Samples			
3250322007	3250322009	3250322001	3250322010
3250322002	3250322015	3250322011	3250322003
3250322012	3250322004	3250322013	3250322005
3250322014	3250322016	3250322006	3250322008

Method Blank 3523740 (MB) Created on 06/30/2022 12:04 For QC Batch 860435

RESULTS

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

SURROGATES

Compound	CAS No	Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	BLK 0.74	1	74.3	29 - 112	
Fluoranthene-d10	93951-69-0	BLK 0.92	1	91.5	45 - 130	

Lab Control Standard 3523741 (LCS) Created on 06/30/2022 12:04 For QC Batch 860435

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 0.51		1	50.7	22 - 75		

SURROGATES

Compound	CAS No	Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	LCS 0.79	1	79.4	29 - 112	
Fluoranthene-d10	93951-69-0	LCS 0.94	1	93.7	45 - 130	

Matrix Spike 3523742 (MS) 3250322003 For QC Batch 860435

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

RESULTS

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	MS 10.80	11.60	1	NC	22 - 75		



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	MS	0.67	1	66.6	29 - 112	
Fluoranthene-d10	93951-69-0	MS	0.55	1	55.3	45 - 130	

Duplicate 3523743 (DUP) 3250322015 For QC Batch 860435

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

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)		Qualifiers
1,4-Dioxane	123-91-1	DUP	0	0	RPD 0 (Max-30)	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	DUP	0.59	1	59.3	29 - 112	
Fluoranthene-d10	93951-69-0	DUP	0.72	1	71.7	45 - 130	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS

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

Associated Samples			
3250322006	3250322008	3250322007	3250322009
3250322001	3250322014	3250322010	3250322002
3250322015	3250322011	3250322003	3250322012
3250322004	3250322013	3250322005	

Method Blank 3252816 (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 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
Dibromomethane	74-95-3	BLK	1.0 U	ug/L	1.0	U



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
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	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		



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-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		
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		



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
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	

QC Batch

QC Batch	862548	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

Associated Samples

3250322016 3250322017

Method Blank

3526094 (MB)

Created on 07/07/2022 11:14

For QC Batch 862548

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



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
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
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	29.80	30	99.3	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	33.40	30	111	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	31.90	30	106	78 - 116	
Toluene-d8	2037-26-5	BLK	30.20	30	101	76 - 127	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

Lab Control Standard

3526095 (LCS)

Created on 07/07/2022 11:14

For QC Batch 862548

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	20.90		20	105	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	20.70		20	104	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	18.20		20	90.9	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	19		20	95.2	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	19.20		20	96.2	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	20.90		20	105	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	20.90		20	104	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	19.60		20	97.8	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	18.70		20	93.7	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	21		20	105	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	14.80		20	74.1	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	19.90		20	99.7	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	19		20	94.8	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	19.30		20	96.6	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	19.20		20	96	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	19		20	95	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	19.10		20	95.3	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	18.80		20	94.1	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	22.40		20	112	64 - 129		
2-Butanone	78-93-3	LCS	101		100	101	50 - 152		
2-Hexanone	591-78-6	LCS	78.10		100	78.1	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	91.20		100	91.2	71 - 146		
Acetone	67-64-1	LCS	98.20		100	98.2	40 - 151		
Benzene	71-43-2	LCS	20.80		20	104	80 - 124		
Bromobenzene	108-86-1	LCS	19.70		20	98.7	81 - 119		
Bromochloromethane	74-97-5	LCS	22		20	110	73 - 117		
Bromodichloromethane	75-27-4	LCS	20		20	100	79 - 126		
Bromoform	75-25-2	LCS	17.70		20	88.7	70 - 123		
Bromomethane	74-83-9	LCS	19.20		20	96	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	20.30		20	102	62 - 132		
Chlorobenzene	108-90-7	LCS	19.70		20	98.6	85 - 117		
Chlorodibromomethane	124-48-1	LCS	18.50		20	92.4	77 - 122		
Chloroethane	75-00-3	LCS	18.60		20	93	51 - 142		
Chloroform	67-66-3	LCS	19.90		20	99.7	78 - 122		
Chloromethane	74-87-3	LCS	19		20	94.9	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	19.70		20	98.3	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	19.50		20	97.7	81 - 121		
Dibromomethane	74-95-3	LCS	20.40		20	102	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	20.40		20	102	17 - 166		
Diisopropyl ether	108-20-3	LCS	18.60		20	93.2	74 - 131		
Ethylbenzene	100-41-4	LCS	20.70		20	103	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	24.60		20	123	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	20.50		20	102	69 - 115		
Methylene Chloride	75-09-2	LCS	19.30		20	96.5	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	42		40	105	79 - 125		
Naphthalene	91-20-3	LCS	18		20	90.2	56 - 134		
o-Chlorotoluene	95-49-8	LCS	19		20	94.8	78 - 126		
o-Xylene	95-47-6	LCS	21.10		20	106	79 - 124		
p-Chlorotoluene	106-43-4	LCS	19		20	94.8	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	21.50		20	108	72 - 123		
Styrene	100-42-5	LCS	19.50		20	97.7	79 - 123		
Tetrachloroethene	127-18-4	LCS	19.20		20	95.8	72 - 124		
Toluene	108-88-3	LCS	20.30		20	101	80 - 125		
Total Xylenes	1330-20-7	LCS	63.10		60	105	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.10		20	101	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	20.20		20	101	78 - 126		
Trichloroethene	79-01-6	LCS	19.30		20	96.6	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	21.80		20	109	38 - 123		
Vinyl Acetate	108-05-4	LCS	17.40		20	86.9	58 - 136		
Vinyl Chloride	75-01-4	LCS	20.20		20	101	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	27.60	30	92.1	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	31.80	30	106	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	30.40	30	101	78 - 116	
Toluene-d8	2037-26-5	LCS	29.20	30	97.4	76 - 127	

Matrix Spike 3526186 (MS) 3250322016 For QC Batch 862548

****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 3526187 (MSD) 3250322016 For QC Batch 862548

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	23.60	0	20	118	78 - 121		
1,1,1,2-Tetrachloroethane	630-20-6	MSD	23.40	0	20	117	78 - 121	RPD <u>0.86</u> (Max-16)	
1,1,1-Trichloroethane	71-55-6	MS	23.90	0	20	120	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	24	0	20	120	66 - 130	RPD <u>0.46</u> (Max-20)	
1,1,2,2-Tetrachloroethane	79-34-5	MS	17.90	0	20	89.5	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	18.10	0	20	90.3	74 - 135	RPD <u>0.92</u> (Max-16)	
1,1,2-Trichloroethane	79-00-5	MS	20.90	0	20	104	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	20.50	0	20	103	82 - 126	RPD <u>1.62</u> (Max-15)	
1,1-Dichloroethane	75-34-3	MS	22.40	0	20	112	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	22.10	0	20	110	78 - 124	RPD <u>1.49</u> (Max-15)	
1,1-Dichloroethane	75-35-4	MS	27.90	4	20	119	63 - 128		



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
1,1-Dichloroethene	75-35-4	MSD	27.70	4	20	118	63 - 128	RPD <u>0.85</u> (Max-21)	
1,1-Dichloropropene	563-58-6	MS	24.80	0	20	124	76 - 126		
1,1-Dichloropropene	563-58-6	MSD	24.50	0	20	122	76 - 126	RPD <u>1.46</u> (Max-16)	
1,2,3-Trichlorobenzene	87-61-6	MS	14	0	20	70	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	16.20	0	20	80.8	61 - 126	RPD <u>14.20</u> (Max-36)	
1,2,3-Trichloropropane	96-18-4	MS	17.70	0	20	88.7	75 - 132		
1,2,3-Trichloropropane	96-18-4	MSD	17.80	0	20	89	75 - 132	RPD <u>0.36</u> (Max-19)	
1,2,4-Trichlorobenzene	120-82-1	MS	17.70	0	20	88.4	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	19.70	0	20	98.4	67 - 123	RPD <u>10.60</u> (Max-22)	
1,2-Dibromo-3-chloropropane	96-12-8	MS	12.60	0	20	63.1	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	13	0	20	64.9	59 - 133	RPD <u>2.84</u> (Max-26)	
1,2-Dibromoethane	106-93-4	MS	20.80	0	20	104	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	20.90	0	20	104	80 - 124	RPD <u>0.59</u> (Max-19)	
1,2-Dichlorobenzene	95-50-1	MS	20.10	0	20	100	82 - 118		
1,2-Dichlorobenzene	95-50-1	MSD	20.70	0	20	103	82 - 118	RPD <u>2.91</u> (Max-15)	
1,2-Dichloroethane	107-06-2	MS	21.10	0	20	105	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	20.40	0	20	102	70 - 133	RPD <u>3.15</u> (Max-19)	
1,2-Dichloropropane	78-87-5	MS	22.20	0	20	111	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	21.70	0	20	108	81 - 127	RPD <u>2.27</u> (Max-15)	
1,3-Dichlorobenzene	541-73-1	MS	20.40	0	20	102	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	21.20	0	20	106	81 - 118	RPD <u>3.88</u> (Max-16)	
1,3-Dichloropropane	142-28-9	MS	20.80	0	20	104	82 - 126		
1,3-Dichloropropane	142-28-9	MSD	20.60	0	20	103	82 - 126	RPD <u>1.07</u> (Max-15)	
1,4-Dichlorobenzene	106-46-7	MS	19.80	0	20	99	81 - 116		
1,4-Dichlorobenzene	106-46-7	MSD	20.80	0	20	104	81 - 116	RPD <u>4.77</u> (Max-15)	
2,2-Dichloropropane	594-20-7	MS	23.70	0	20	118	64 - 129		
2,2-Dichloropropane	594-20-7	MSD	23.50	0	20	118	64 - 129	RPD <u>0.66</u> (Max-18)	
2-Butanone	78-93-3	MS	92.40	0	100	92.4	50 - 152		
2-Butanone	78-93-3	MSD	90.10	0	100	90.1	50 - 152	RPD <u>2.53</u> (Max-16)	
2-Hexanone	591-78-6	MS	70	0	100	70	65 - 154		
2-Hexanone	591-78-6	MSD	70.10	0	100	70.1	65 - 154	RPD <u>0.24</u> (Max-17)	
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	84.80	0	100	84.8	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	85.20	0	100	85.2	71 - 146	RPD <u>0.43</u> (Max-16)	
Acetone	67-64-1	MS	80.90	0	100	80.9	40 - 151		
Acetone	67-64-1	MSD	80.90	0	100	80.9	40 - 151	RPD <u>0.06</u> (Max-40)	
Benzene	71-43-2	MS	23.80	0	20	119	80 - 124		
Benzene	71-43-2	MSD	23.60	0	20	118	80 - 124	RPD <u>0.63</u> (Max-26)	
Bromobenzene	108-86-1	MS	22	0	20	110	81 - 119		
Bromobenzene	108-86-1	MSD	22.20	0	20	111	81 - 119	RPD <u>0.71</u> (Max-17)	
Bromochloromethane	74-97-5	MS	25	0	20	125*	73 - 117		
Bromochloromethane	74-97-5	MSD	24.20	0	20	121*	73 - 117	RPD <u>3.19</u> (Max-19)	
Bromodichloromethane	75-27-4	MS	22.80	0	20	114	79 - 126		
Bromodichloromethane	75-27-4	MSD	22.50	0	20	112	79 - 126	RPD <u>1.44</u> (Max-16)	
Bromoform	75-25-2	MS	17.80	0	20	88.9	70 - 123		
Bromoform	75-25-2	MSD	17.90	0	20	89.6	70 - 123	RPD <u>0.71</u> (Max-16)	
Bromomethane	74-83-9	MS	22.80	0	20	114	45 - 148		
Bromomethane	74-83-9	MSD	22.40	0	20	112	45 - 148	RPD <u>2.01</u> (Max-26)	
Carbon Tetrachloride	56-23-5	MS	24	0	20	120	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	24.30	0	20	121	62 - 132	RPD <u>1.12</u> (Max-17)	



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
Chlorobenzene	108-90-7	MS	22.40	0	20	112	85 - 117		
Chlorobenzene	108-90-7	MSD	22.20	0	20	111	85 - 117	RPD	<u>1.01</u> (Max-15)
Chlorodibromomethane	124-48-1	MS	20.20	0	20	101	77 - 122		
Chlorodibromomethane	124-48-1	MSD	20.10	0	20	100	77 - 122	RPD	<u>0.68</u> (Max-15)
Chloroethane	75-00-3	MS	19.60	0	20	97.9	51 - 142		
Chloroethane	75-00-3	MSD	19.40	0	20	97.1	51 - 142	RPD	<u>0.80</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>2.02</u> (Max-16)
Chloromethane	74-87-3	MS	19.80	0	20	99	38 - 156		
Chloromethane	74-87-3	MSD	19.40	0	20	97	38 - 156	RPD	<u>2.06</u> (Max-27)
cis-1,2-Dichloroethene	156-59-2	MS	22.60	0	20	113	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	22.10	0	20	110	78 - 125	RPD	<u>2.44</u> (Max-21)
cis-1,3-Dichloropropene	10061-01-5	MS	21.70	0	20	109	81 - 121		
cis-1,3-Dichloropropene	10061-01-5	MSD	21.70	0	20	108	81 - 121	RPD	<u>0.25</u> (Max-16)
Dibromomethane	74-95-3	MS	22.10	0	20	111	81 - 125		
Dibromomethane	74-95-3	MSD	21.60	0	20	108	81 - 125	RPD	<u>2.20</u> (Max-16)
Dichlorodifluoromethane	75-71-8	MS	22.70	0	20	114	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	22.60	0	20	113	17 - 166	RPD	<u>0.74</u> (Max-24)
Diisopropyl ether	108-20-3	MS	20.60	0	20	103	74 - 131		
Diisopropyl ether	108-20-3	MSD	20.20	0	20	101	74 - 131	RPD	<u>2.11</u> (Max-15)
Ethylbenzene	100-41-4	MS	23.60	0	20	118	80 - 124		
Ethylbenzene	100-41-4	MSD	23.70	0	20	118	80 - 124	RPD	<u>0.40</u> (Max-19)
Hexachlorobutadiene	87-68-3	MS	21.60	0	20	108	55 - 128		
Hexachlorobutadiene	87-68-3	MSD	22.80	0	20	114	55 - 128	RPD	<u>5.51</u> (Max-35)
Methyl t-Butyl Ether	1634-04-4	MS	21.70	0	20	108	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	21.40	0	20	107	69 - 115	RPD	<u>1.47</u> (Max-20)
Methylene Chloride	75-09-2	MS	22.10	0	20	111	76 - 121		
Methylene Chloride	75-09-2	MSD	21.80	0	20	109	76 - 121	RPD	<u>1.56</u> (Max-17)
mp-Xylene	108383/106423	MS	47.60	0	40	119	79 - 125		
mp-Xylene	108383/106423	MSD	47.80	0	40	119	79 - 125	RPD	<u>0.44</u> (Max-21)
Naphthalene	91-20-3	MS	13.30	0	20	66.5	56 - 134		
Naphthalene	91-20-3	MSD	14.60	0	20	72.8	56 - 134	RPD	<u>9.02</u> (Max-40)
o-Chlorotoluene	95-49-8	MS	21.10	0	20	105	78 - 126		
o-Chlorotoluene	95-49-8	MSD	21.90	0	20	110	78 - 126	RPD	<u>3.85</u> (Max-17)
o-Xylene	95-47-6	MS	23.90	0	20	119	79 - 124		
o-Xylene	95-47-6	MSD	24	0	20	120	79 - 124	RPD	<u>0.59</u> (Max-19)
p-Chlorotoluene	106-43-4	MS	21.10	0	20	105	78 - 125		
p-Chlorotoluene	106-43-4	MSD	21.50	0	20	107	78 - 125	RPD	<u>1.89</u> (Max-16)
p-Isopropyltoluene	99-87-6	MS	22.80	0	20	114	72 - 123		
p-Isopropyltoluene	99-87-6	MSD	24.50	0	20	123	72 - 123	RPD	<u>7.51</u> (Max-17)
Styrene	100-42-5	MS	22.30	0	20	111	79 - 123		
Styrene	100-42-5	MSD	22.70	0	20	113	79 - 123	RPD	<u>1.81</u> (Max-16)
Tetrachloroethene	127-18-4	MS	21.50	0	20	108	72 - 124		
Tetrachloroethene	127-18-4	MSD	21.90	0	20	109	72 - 124	RPD	<u>1.58</u> (Max-38)
Toluene	108-88-3	MS	23.50	0	20	118	80 - 125		
Toluene	108-88-3	MSD	23.40	0	20	117	80 - 125	RPD	<u>0.42</u> (Max-20)
Total Xylenes	1330-20-7	MS	71.40	0	60	119	79 - 125		
Total Xylenes	1330-20-7	MSD	71.80	0	60	120	79 - 125	RPD	<u>0.49</u> (Max-35)



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
trans-1,2-Dichloroethene	156-60-5	MS	23.20	0	20	116	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	23.10	0	20	116	71 - 122	RPD <u>0.36</u> (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	21.60	0	20	108	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	21.20	0	20	106	78 - 126	RPD <u>1.89</u> (Max-18)	
Trichloroethene	79-01-6	MS	22.20	0	20	111	77 - 124		
Trichloroethene	79-01-6	MSD	22.10	0	20	110	77 - 124	RPD <u>0.82</u> (Max-18)	
Trichlorofluoromethane	75-69-4	MS	23.20	0	20	116	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	23.30	0	20	117	38 - 123	RPD <u>0.36</u> (Max-23)	
Vinyl Acetate	108-05-4	MS	15.90	0	20	79.5	58 - 136		
Vinyl Acetate	108-05-4	MSD	15.80	0	20	78.9	58 - 136	RPD <u>0.79</u> (Max-17)	
Vinyl Chloride	75-01-4	MS	21.80	0	20	109	27 - 138		
Vinyl Chloride	75-01-4	MSD	21.30	0	20	106	27 - 138	RPD <u>2.54</u> (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	27.80	30	92.7	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	27.30	30	91	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	32.40	30	108	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	33.20	30	111	79 - 114	
Dibromofluoromethane	1868-53-7	MS	31.50	30	105	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	31.30	30	104	78 - 116	
Toluene-d8	2037-26-5	MS	30	30	100	76 - 127	
Toluene-d8	2037-26-5	MSD	30	30	100	76 - 127	

QC Batch

Associated Samples

QC Batch	863189	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

3250322005

Method Blank

3527297 (MB)

Created on 07/09/2022 09:04

For QC Batch 863189

RESULTS

Compound	CAS No		Result	Units	RD/L	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	30	96	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	30	98.7	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	30	91.8	78 - 116	
Toluene-d8	2037-26-5	BLK	30	92.6	76 - 127	

Lab Control Standard 3527298 (LCS) Created on 07/09/2022 09:04 For QC Batch 863189

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	17.80	20	89.2	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	19.90	20	99.7	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	19.40	20	97	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	18.60	20	92.9	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	20.60	20	103	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.60	20	108	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	21.50	20	108	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	21.90	20	109	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	19.50	20	97.6	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	21.50	20	108	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	20.90	20	105	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	19	20	94.8	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	18.30	20	91.7	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20	20	99.9	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	20.60	20	103	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	17.70	20	88.4	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	18.30	20	91.5	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	18.40	20	92	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	21.50	20	108	64 - 129		
2-Butanone	78-93-3	LCS	121	100	121	50 - 152		
2-Hexanone	591-78-6	LCS	104	100	104	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	116	100	116	71 - 146		
Acetone	67-64-1	LCS	109	100	109	40 - 151		
Benzene	71-43-2	LCS	20.80	20	104	80 - 124		
Bromobenzene	108-86-1	LCS	18.50	20	92.4	81 - 119		
Bromochloromethane	74-97-5	LCS	18.60	20	93	73 - 117		
Bromodichloromethane	75-27-4	LCS	19.60	20	98.1	79 - 126		
Bromoform	75-25-2	LCS	18.80	20	93.8	70 - 123		
Bromomethane	74-83-9	LCS	17.50	20	87.3	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	19.90		20	99.5	62 - 132		
Chlorobenzene	108-90-7	LCS	17.70		20	88.7	85 - 117		
Chlorodibromomethane	124-48-1	LCS	17.90		20	89.6	77 - 122		
Chloroethane	75-00-3	LCS	22.50		20	112	51 - 142		
Chloroform	67-66-3	LCS	19.80		20	98.9	78 - 122		
Chloromethane	74-87-3	LCS	19.50		20	97.6	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	21.60		20	108	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	19		20	94.9	81 - 121		
Dibromomethane	74-95-3	LCS	19.80		20	99	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	19.50		20	97.7	17 - 166		
Diisopropyl ether	108-20-3	LCS	21.60		20	108	74 - 131		
Ethylbenzene	100-41-4	LCS	18.60		20	93.2	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	21.60		20	108	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	20.10		20	100	69 - 115		
Methylene Chloride	75-09-2	LCS	18.40		20	92	76 - 121		
mp-Xylene	108383/106423	LCS	37.50		40	93.7	79 - 125		
Naphthalene	91-20-3	LCS	26		20	130	56 - 134		
o-Chlorotoluene	95-49-8	LCS	19.30		20	96.3	78 - 126		
o-Xylene	95-47-6	LCS	18.20		20	91.2	79 - 124		
p-Chlorotoluene	106-43-4	LCS	20		20	99.8	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	19.50		20	97.5	72 - 123		
Styrene	100-42-5	LCS	20.10		20	101	79 - 123		
Tetrachloroethene	127-18-4	LCS	17.10		20	85.3	72 - 124		
Toluene	108-88-3	LCS	19.20		20	95.8	80 - 125		
Total Xylenes	1330-20-7	LCS	55.70		60	92.9	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.90		20	105	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	20.10		20	101	78 - 126		
Trichloroethene	79-01-6	LCS	18.50		20	92.5	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	20.50		20	102	38 - 123		
Vinyl Acetate	108-05-4	LCS	17.40		20	86.8	58 - 136		
Vinyl Chloride	75-01-4	LCS	21.60		20	108	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	29.80	30	99.5	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	27.80	30	92.6	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	28.40	30	94.7	78 - 116	
Toluene-d8	2037-26-5	LCS	26.90	30	89.7	76 - 127	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3250322001	MW-36D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322002	MW-25D-130	SW846 3510C SW846 3510C N/A	860435 860435 N/A	06/30/2022 16:35 06/30/2022 16:35 N/A	J1H J1H	SW846 8270E SIM SW846 8270E SIM SW846 8260D	862222 861785 862258
3250322003	MW-25D-190	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322004	MW-45	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322005	MW-24D	SW846 3510C SW846 3510C N/A N/A	860435 860435 N/A N/A	06/30/2022 16:35 06/30/2022 16:35 N/A N/A	J1H J1H	SW846 8270E SIM SW846 8270E SIM SW846 8260D SW846 8260D	862222 861785 863189 862258
3250322006	DUP-062722	SW846 3510C SW846 3510C N/A	860435 860435 N/A	06/30/2022 16:35 06/30/2022 16:35 N/A	J1H J1H	SW846 8270E SIM SW846 8270E SIM SW846 8260D	862222 861785 862258
3250322007	MW-35D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322008	MW-34D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322009	MW-31D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322010	MW-33D-235	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322011	MW-33D-295	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322012	MW-30D-273	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322013	MW-30D-413	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322014	MW-29D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322015	MW-32D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862258
3250322016	MW-28D	SW846 3510C N/A	860435 N/A	06/30/2022 16:35 N/A	J1H	SW846 8270E SIM SW846 8260D	861785 862548
3250322017	Trip Blank	N/A	N/A	N/A		SW846 8260D	862548



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.

3250322

Logged By: KSB
PH: SJB



COC #: 20
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 off site 31401545.011
Bill To:

Purchase Order #:
 Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.
 Date Required: Approved?
 Email? -Y -N

Container Type	Container Size	Preservative	ANALYSES/METHOD REQUESTED
VOA Amber	40	HCl	
	250		

Temp Taken By: KSB
Therm ID: 510
WO Temp (°C): 34

Receipt Info completed by: _____
 WV Containers (0-6°C): Y N NA
 Deviations? NO YES
 If YES, list below:

Cooler Custody Seals Intact: Y N NA
 Sample Custody Seal Intact: Y N NA
 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 #: _____

Client contact: _____
 Date/Tech: _____

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hr:mm	SDWA Sample Type (see key)	Matrix (See bottom of COC)	Enter Number of Containers Per Sample or Field Results Below.
1 MW-360	6/27/22	1150	G GW	G GW	2
2 MW-250-130	6/27/22	1430	G GW	G GW	2
3 MW-250-190	6/27/22	1410	G GW	G GW	2
4 MW-250 MW-450	6/27/22	1310	G GW	G GW	2
5 MW-240	6/27/22	1325	G GW	G GW	2
6 MW-250-130/MS	6/27/22	1430	G GW	G GW	2
7 MW-250-130/MSD	6/27/22	1430	G GW	G GW	2
8 OUP-062722	6/27/22	1200	G GW	G GW	2
9 Trip Blank	6/27/22				6
10					

Sample(s) for Radiation testing? Y N
 Reportable SDWA Sample(s)? Y N
 SDWA State of Origin? _____
 PWSID # _____
 PWS Contact: _____ PWS Phone #: _____

Rad Screen (UCI) _____
 New Source? Y N
 New Source Contact: _____

SDWA Sample Type Key: D=Distribution E=Entry Point
 R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Time	Relinquished By / Company Name	Received By / Company Name
6/27/22 1525	1 [Signature]	2 [Signature]
6/27/22 1900	3 [Signature]	4 [Signature]
	5	6
	7	8
	9	10

Contains Short Hold Testing YES NO
 Internal Use: If less than 48 hours - notify lab upon receipt

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 Equis Custom
 Sample Disposal Lab Special

State Samples Collected In: NY NJ PA WV FL MD other

Date	Time	Relinquished By / Company Name	Received By / Company Name
6/27/22	1525	1 [Signature]	2 [Signature]
6/27/22	1900	3 [Signature]	4 [Signature]
		5	6
		7	8
		9	10

SAMPLED BY (Please Print, if MD include Sampler #): E1108H Mertynkiewicz

Comments:

* G-Grab, C-Composite **Matrix - A=Air, D=Drinking Water, G=Groundwater, O=Oil, LW=Liquid Waste, S=Soil/Solid/Sudge, SW=Surface Water, WP=Wipe, WW=Wastewater

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



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

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

COC #: 1 of 2 3250322 of
ALS Quote #:

Client Name: WSP
Address: 13530 Dulles Technology Dr, Suite 300, Herndon VA 20171
Contact: Eric Johnson
Phone#: (703) 709-6500
Project Name#: Kop-Flex Offsets 3140545 011
Bill To:
Purchase Order #:
TAT: Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? -Y

Container Type	VOA	Ambr	Container Size	Preservative	Matrix (See bottom of COC)	SDWA Sample Type (see key)	Enter Number of Containers	Received By / Company Name
	VOA	Ambr	40ml 30ml		G W C	G W	2	WSP
				PCI Name		G W	2	AD

Sample Description/Location (as it will appear on the lab report)	Date Collected (mm/dd/yy)	Time (hh:mm)	Comments
1 MW-350	6/27/22	0855	
2 MW-340	6/27/22	0915	
3 MW-310	6/27/22	0955	
4 MW-330-235	6/27/22	0930	
5 MW-330-295	6/27/22	0940	
6 MW-300-273	6/27/22	1030	
7 MW-300-413	6/27/22	1020	
8 MW-290	6/27/22	1045	
9 MW-320	6/27/22	1100	
10 MW-280	6/27/22	1135	

Temp Taken By: KSR
WO Temp (°C): 57.0
Therm ID: 570
Receipt Info Completed by: [Signature]
Cooler Custody Seal Intact: Y N (NA)
Sample Custody Seal Intact: Y N (NA)
Received on Ice: Y N (NA)
Cooler & 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 Trip Blank: Y N (NA)
NI ≤ 4 Days? Y N (NA)
Courier/Tracking #: [Blank]
Sample(s) for Radiation testing? Y N (NA)
Reportable SDWA Sample(s)? Y N (NA)
SDWA State of Origin? [Blank]
PWSID #: [Blank]
PWS Contact: [Blank] **PWS Phone #:** [Blank]
Rad Screen (uCi): [Blank]
New Source? Y N (NA)
New Source Contact: [Blank]

Temp Taken By: KSD
WO Temp (°C): 51.0
Therm ID: 510
Receipt Info Completed by: [Signature]
Cooler Custody Seal Intact: Y N (NA)
Sample Custody Seal Intact: Y N (NA)
Received on Ice: Y N (NA)
Cooler & 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 Trip Blank: Y N (NA)
NI ≤ 4 Days? Y N (NA)
Courier/Tracking #: [Blank]
Sample(s) for Radiation testing? Y N (NA)
Reportable SDWA Sample(s)? Y N (NA)
SDWA State of Origin? [Blank]
PWSID #: [Blank]
PWS Contact: [Blank] **PWS Phone #:** [Blank]
Rad Screen (uCi): [Blank]
New Source? Y N (NA)
New Source Contact: [Blank]

SDWA Sample Type Key: D=Distribution E=Entry Point
R=Raw P=Plant C=Check S=Special A=Annual Startup

Contains Short Hold Testing YES NO
Internal Use: If less than 48 hours - notify lab upon receipt

Standard Lvl 1: CLP-like HSCA State Samples Collected in NY
Standard Lvl 2: DOD Landfill NJ
Standard Lvl 3: NJ RED NJ GW PA
Standard Lvl 4: NJ Full WV
Excel Summary: Lab
Equis: Special
Custom: other

Date:	Time	Relinquished By / Company Name	Received By / Company Name
6/27/22	1525	[Signature]	WSP
6/27/22	1900	[Signature]	AD

EDD: Format Type
EDD: Surface Water, Wipe, Wastewater
EDD: Groundwater, Oil, Liquid Waste, Solid/Solids/Sludge, Air, Drinking Water, Matrix - A=Air, D=Drinking Water, GW=Groundwater, O=Oil, LW=Liquid Waste, S=Solid/Solids/Sludge, SW=Surface Water, WP=Wipe, WW=Wastewater

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

Susan Scherer

From: Johnson, Eric <Eric.Johnson@wsp.com>
Sent: Monday, August 01, 2022 3:48 PM
To: Susan Scherer
Cc: Martynkiewicz, Elliott
Subject: [EXTERNAL] - FW: Former KOP-Flex Facility Offsi[3250322]
Attachments: 3250322_180765.pdf

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Susan-

We are going to need ALS to make a correction to the attached lab report for samples from the Former Kop-Flex Facility Site. This correction involves changing the Client Sample ID "MW-45D" to "MW-45". This was an error on our part as the incorrect sample ID was indicated on the chain-of-custody form provided with the samples. Our apologies for not catching this error before the laboratory report was issued for the samples.

Please let us know when we will be able to receive the revised report. Thanks for your help.

Eric



Eric Johnson

Senior Technical Manager
Professional Geologist

T+ 1 703-318-3936
M+ 1 703-626-0670
eric.johnson@wsp.com

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

wsp.com

From: ALMDT.LIMSAutoEmail@alsglobal.com <ALMDT.LIMSAutoEmail@alsglobal.com>
Sent: Monday, July 11, 2022 10:04 PM
To: Martynkiewicz, Elliott <Elliott.Martynkiewicz@wsp.com>; Johnson, Eric <Eric.Johnson@wsp.com>
Subject: Former KOP-Flex Facility Offsi[3250322]

The EDD files are delivered as attachments to this email.
Please do not reply to this automated sender account. An ALS representative can be contacted by using the information provided in the signature below.

Kind Regards,

Reporting
Environmental
USA



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almdt.customerservice@alsglobal.com

301 Fulling Mill Road
Middletown, PA 17057

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-LAEmHhHzdJzBITWfa4Hgs7pbKl



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | 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 [31405608.011](#)
Workorder [3275166](#)
Report ID [221697 on 1/30/2023](#)

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 21, 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.

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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>
3275166001	MW-34D	Ground Water	11/21/2022 08:40	11/21/2022 17:40	CBC	Collected By Client
3275166002	MW-35D	Ground Water	11/21/2022 08:55	11/21/2022 17:40	CBC	Collected By Client
3275166003	MW-33D-235	Ground Water	11/21/2022 09:35	11/21/2022 17:40	CBC	Collected By Client
3275166004	MW-33D-295	Ground Water	11/21/2022 09:40	11/21/2022 17:40	CBC	Collected By Client
3275166005	MW-31D	Ground Water	11/21/2022 10:05	11/21/2022 17:40	CBC	Collected By Client
3275166006	MW-29D	Ground Water	11/21/2022 10:15	11/21/2022 17:40	CBC	Collected By Client
3275166007	MW-30D-273	Ground Water	11/21/2022 10:30	11/21/2022 17:40	CBC	Collected By Client
3275166008	MW-30D-413	Ground Water	11/21/2022 10:40	11/21/2022 17:40	CBC	Collected By Client
3275166009	MW-32D	Ground Water	11/21/2022 11:45	11/21/2022 17:40	CBC	Collected By Client
3275166010	MW-28D	Ground Water	11/21/2022 11:30	11/21/2022 17:40	CBC	Collected By Client
3275166011	MW-36D	Ground Water	11/21/2022 11:45	11/21/2022 17:40	CBC	Collected By Client
3275166012	MW-45	Ground Water	11/21/2022 13:05	11/21/2022 17:40	CBC	Collected By Client
3275166013	MW-24D	Ground Water	11/21/2022 13:15	11/21/2022 17:40	CBC	Collected By Client
3275166014	MW-25D-130	Ground Water	11/21/2022 14:00	11/21/2022 17:40	CBC	Collected By Client
3275166015	MW-25D-190	Ground Water	11/21/2022 13:45	11/21/2022 17:40	CBC	Collected By Client
3275166016	Dup-112122	Ground Water	11/21/2022 12:10	11/21/2022 17:40	CBC	Collected By Client
3275166017	Trip Blank-C	Ground Water	11/21/2022 12:10	11/21/2022 17:40	CBC	Collected By Client
3275166018	Trip Blank-D	Ground Water	11/21/2022 12:10	11/21/2022 17:40	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	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.



Project Notations

P1 This workorder was modified to correct the reporting limits of 1,4-Dioxane from the 8270E SIM analysis based on Task Orders submitted to ALS. A reporting limit (RL) for 1,4-dioxane of 1 µg/L was requested. AJL 1/30/2023

Sample Notations

Lab ID	Sample ID
--------	-----------

Result Notations

Notation Ref.	
1	The surrogate Fluoranthene-d10 for method SW846 8270E SIM was outside of control limits. The % Recovery was reported as 43.9 and the control limits were 45 to 130. This result was reported at a dilution of 1.
2	The QC sample type MSD for method SW846 8270E SIM was outside the control limits for the analyte 1,4-Dioxane. The % Recovery was reported as 128 and the control limits were 22 to 75.
3	The QC sample type MS for method SW846 8270E SIM was outside the control limits for the analyte 1,4-Dioxane. The % Recovery was reported as 184 and the control limits were 22 to 75.



Detected Results Summary

Client Sample ID	MW-34D	Collected	11/21/2022 08:40
Lab Sample ID	3275166001	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
VOLATILE ORGANICS					
1,2-Dichloroethane	1.3	ug/L	1.0	SW846 8260D	#
1,3-Dichloropropane	3.5	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	MW-33D-295	Collected	11/21/2022 09:40
Lab Sample ID	3275166004	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	3.1	ug/L	1.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1-Dichloroethene	6.0	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	MW-31D	Collected	11/21/2022 10:05
Lab Sample ID	3275166005	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
VOLATILE ORGANICS					
1,2-Dichloroethane	1.3	ug/L	1.0	SW846 8260D	#
1,3-Dichloropropane	3.4	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	MW-30D-273	Collected	11/21/2022 10:30
Lab Sample ID	3275166007	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	7.0	ug/L	1.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	1.2	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	31.3	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	MW-28D	Collected	11/21/2022 11:30
Lab Sample ID	3275166010	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	3.1	ug/L	1.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1-Dichloroethene	6.2	ug/L	1.0	SW846 8260D	#



Detected Results Summary

Client Sample ID	MW-24D	Collected	11/21/2022 13:15
Lab Sample ID	3275166013	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	148	ug/L	26.3	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	15.3	ug/L	1.0	SW846 8260D	#
1,1,2-Trichloroethane	1.2	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	114	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	1020	ug/L	20.0	SW846 8260D	#
1,2-Dichloroethane	7.5	ug/L	1.0	SW846 8260D	#
Chloroethane	2.8	ug/L	1.0	SW846 8260D	#
cis-1,2-Dichloroethene	5.5	ug/L	1.0	SW846 8260D	#
Tetrachloroethene	1.3	ug/L	1.0	SW846 8260D	#
Trichloroethene	7.7	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	MW-25D-130	Collected	11/21/2022 14:00
Lab Sample ID	3275166014	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	16.1	ug/L	10.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	5.6	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	5.5	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	80.2	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	MW-25D-190	Collected	11/21/2022 13:45
Lab Sample ID	3275166015	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	10.2	ug/L	1.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	3.7	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	7.3	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	29.1	ug/L	1.0	SW846 8260D	#
Methyl t-Butyl Ether	1.2	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	Dup-112122	Collected	11/21/2022 12:10
Lab Sample ID	3275166016	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
SEMIVOLATILE SIM					
1,4-Dioxane	19.1	ug/L	2.5	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	5.6	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	5.3	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	76.2	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	Trip Blank-C	Collected	11/21/2022 12:10
Lab Sample ID	3275166017	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
VOLATILE ORGANICS					
Chloroform	1.1	ug/L	1.0	SW846 8260D	#

Project 31405608.011
Workorder 3275166



Detected Results Summary

Client Sample ID	Trip Blank-D	Collected	11/21/2022 12:10
Lab Sample ID	3275166018	Lab Receipt	11/21/2022 17:40

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
VOLATILE ORGANICS					
Chloroform	1.1	ug/L	1.0	SW846 8260D	#



Results

Client Sample ID	MW-34D	Collected	11/21/2022 08:40
Lab Sample ID	3275166001	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 05:23	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	72.9%	29 – 112	11/29/2022 05:23	
Fluoranthene-d10	93951-69-0	87.1%	45 – 130	11/29/2022 05:23	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2-Dichloroethane	1.3	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,3-Dichloropropane	3.5	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A



Results

Client Sample ID	MW-34D	Collected	11/21/2022 08:40
Lab Sample ID	3275166001	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:14	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:14	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.9%	62 – 133	12/01/2022 16:14	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	12/01/2022 16:14	
Dibromofluoromethane	1868-53-7	90.4%	78 – 116	12/01/2022 16:14	
Toluene-d8	2037-26-5	92.5%	76 – 127	12/01/2022 16:14	



Results

Client Sample ID	MW-35D	Collected	11/21/2022 08:55
Lab Sample ID	3275166002	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 05:50	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	69.6%	29 - 112	11/29/2022 05:50	
Fluoranthene-d10	93951-69-0	96.1%	45 - 130	11/29/2022 05:50	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A



Results

Client Sample ID	MW-35D	Collected	11/21/2022 08:55
Lab Sample ID	3275166002	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 16:37	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 16:37	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.1%	62 – 133	12/01/2022 16:37	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	12/01/2022 16:37	
Dibromofluoromethane	1868-53-7	91%	78 – 116	12/01/2022 16:37	
Toluene-d8	2037-26-5	94.1%	76 – 127	12/01/2022 16:37	



Results

Client Sample ID	MW-33D-235	Collected	11/21/2022 09:35
Lab Sample ID	3275166003	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 06:16	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	72.1%	29 – 112	11/29/2022 06:16	
Fluoranthene-d10	93951-69-0	90%	45 – 130	11/29/2022 06:16	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A



Results

Client Sample ID	MW-33D-235	Collected	11/21/2022 09:35
Lab Sample ID	3275166003	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:00	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:00	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.3%	62 – 133	12/01/2022 17:00	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	12/01/2022 17:00	
Dibromofluoromethane	1868-53-7	91.8%	78 – 116	12/01/2022 17:00	
Toluene-d8	2037-26-5	94.7%	76 – 127	12/01/2022 17:00	



Results

Client Sample ID	MW-33D-295	Collected	11/21/2022 09:40
Lab Sample ID	3275166004	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	3.1	P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 06:43	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	69.2%	29 - 112	11/29/2022 06:43	
Fluoranthene-d10	93951-69-0	99.7%	45 - 130	11/29/2022 06:43	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,1-Dichloroethene	6.0	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A



Results

Client Sample ID	MW-33D-295	Collected	11/21/2022 09:40
Lab Sample ID	3275166004	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:22	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:22	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.7%	62 – 133	12/01/2022 17:22	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	12/01/2022 17:22	
Dibromofluoromethane	1868-53-7	91.5%	78 – 116	12/01/2022 17:22	
Toluene-d8	2037-26-5	93.7%	76 – 127	12/01/2022 17:22	



Results

Client Sample ID	MW-31D	Collected	11/21/2022 10:05
Lab Sample ID	3275166005	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 07:10	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	77.3%	29 - 112	11/29/2022 07:10	
Fluoranthene-d10	93951-69-0	99.1%	45 - 130	11/29/2022 07:10	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2-Dichloroethane	1.3	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,3-Dichloropropane	3.4	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A



Results

Client Sample ID	MW-31D	Collected	11/21/2022 10:05
Lab Sample ID	3275166005	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 17:45	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 17:45	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.2%	62 – 133	12/01/2022 17:45	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	12/01/2022 17:45	
Dibromofluoromethane	1868-53-7	90.8%	78 – 116	12/01/2022 17:45	
Toluene-d8	2037-26-5	93.1%	76 – 127	12/01/2022 17:45	



Results

Client Sample ID	MW-29D	Collected	11/21/2022 10:15
Lab Sample ID	3275166006	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 07:36	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	77.8%	29 – 112	11/29/2022 07:36	
Fluoranthene-d10	93951-69-0	92%	45 – 130	11/29/2022 07:36	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A



Results

Client Sample ID	MW-29D	Collected	11/21/2022 10:15
Lab Sample ID	3275166006	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 18:53	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 18:53	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.2%	62 – 133	12/01/2022 18:53	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	12/01/2022 18:53	
Dibromofluoromethane	1868-53-7	90.4%	78 – 116	12/01/2022 18:53	
Toluene-d8	2037-26-5	92.8%	76 – 127	12/01/2022 18:53	



Results

Client Sample ID	MW-30D-273	Collected	11/21/2022 10:30
Lab Sample ID	3275166007	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	7.0	P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 08:03	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	65.1%	29 - 112	11/29/2022 08:03	
Fluoranthene-d10	93951-69-0	96.6%	45 - 130	11/29/2022 08:03	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,1,1-Trichloroethane	1.2	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,1-Dichloroethene	31.3	P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A



Results

Client Sample ID	MW-30D-273	Collected	11/21/2022 10:30
Lab Sample ID	3275166007	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 15:28	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 15:28	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.3%	62 - 133	12/01/2022 15:28	
4-Bromofluorobenzene	460-00-4	104%	79 - 114	12/01/2022 15:28	
Dibromofluoromethane	1868-53-7	88.9%	78 - 116	12/01/2022 15:28	
Toluene-d8	2037-26-5	91.6%	76 - 127	12/01/2022 15:28	



Results

Client Sample ID	MW-30D-413	Collected	11/21/2022 10:40
Lab Sample ID	3275166008	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 18:17	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	61.1%	29 – 112	11/29/2022 18:17	
Fluoranthene-d10	93951-69-0	91.5%	45 – 130	11/29/2022 18:17	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A



Results

Client Sample ID	MW-30D-413	Collected	11/21/2022 10:40
Lab Sample ID	3275166008	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:39	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:39	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.4%	62 - 133	12/01/2022 19:39	
4-Bromofluorobenzene	460-00-4	104%	79 - 114	12/01/2022 19:39	
Dibromofluoromethane	1868-53-7	89.9%	78 - 116	12/01/2022 19:39	
Toluene-d8	2037-26-5	93%	76 - 127	12/01/2022 19:39	



Results

Client Sample ID	MW-32D	Collected	11/21/2022 11:45
Lab Sample ID	3275166009	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 18:43	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	64.6%	29 - 112	11/29/2022 18:43	
Fluoranthene-d10	93951-69-0	43.9*%	45 - 130	11/29/2022 18:43	1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A



Results

Client Sample ID	MW-32D	Collected	11/21/2022 11:45
Lab Sample ID	3275166009	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/01/2022 19:16	TMP	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/01/2022 19:16	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.5%	62 - 133	12/01/2022 19:16	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	12/01/2022 19:16	
Dibromofluoromethane	1868-53-7	90.7%	78 - 116	12/01/2022 19:16	
Toluene-d8	2037-26-5	93.9%	76 - 127	12/01/2022 19:16	



Results

Client Sample ID	MW-28D	Collected	11/21/2022 11:30
Lab Sample ID	3275166010	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	3.1	P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 19:10	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	74%	29 - 112	11/29/2022 19:10	
Fluoranthene-d10	93951-69-0	89.9%	45 - 130	11/29/2022 19:10	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,1-Dichloroethene	6.2	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A



Results

Client Sample ID	MW-28D	Collected	11/21/2022 11:30
Lab Sample ID	3275166010	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:24	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:24	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.9%	62 - 133	12/02/2022 01:24	
4-Bromofluorobenzene	460-00-4	101%	79 - 114	12/02/2022 01:24	
Dibromofluoromethane	1868-53-7	93.6%	78 - 116	12/02/2022 01:24	
Toluene-d8	2037-26-5	94.9%	76 - 127	12/02/2022 01:24	



Results

Client Sample ID MW-36D Collected 11/21/2022 11:45
Lab Sample ID 3275166011 Lab Receipt 11/21/2022 17:40

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A



Results

Client Sample ID	MW-36D	Collected	11/21/2022 11:45
Lab Sample ID	3275166011	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:47	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:47	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.6%	62 – 133	12/02/2022 01:47	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	12/02/2022 01:47	
Dibromofluoromethane	1868-53-7	90.4%	78 – 116	12/02/2022 01:47	
Toluene-d8	2037-26-5	93.3%	76 – 127	12/02/2022 01:47	



Results

Client Sample ID	MW-45	Collected	11/21/2022 13:05
Lab Sample ID	3275166012	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 20:03	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	66%	29 - 112	11/29/2022 20:03	
Fluoranthene-d10	93951-69-0	93.2%	45 - 130	11/29/2022 20:03	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A



Results

Client Sample ID	MW-45	Collected	11/21/2022 13:05
Lab Sample ID	3275166012	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:10	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:10	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.7%	62 - 133	12/02/2022 02:10	
4-Bromofluorobenzene	460-00-4	102%	79 - 114	12/02/2022 02:10	
Dibromofluoromethane	1868-53-7	91.4%	78 - 116	12/02/2022 02:10	
Toluene-d8	2037-26-5	93.4%	76 - 127	12/02/2022 02:10	



Results

Client Sample ID	MW-24D	Collected	11/21/2022 13:15
Lab Sample ID	3275166013	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	148	P1	ug/L	26.3	SW846 8270E SIM	20	12/01/2022 10:00	S7M	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	70.8%	29 – 112	11/29/2022 20:30	
2-Methylnaphthalene-d10	7297-45-2	0*%	29 – 112	12/01/2022 10:00	
Fluoranthene-d10	93951-69-0	84.1%	45 – 130	11/29/2022 20:30	
Fluoranthene-d10	93951-69-0	92.3%	45 – 130	12/01/2022 10:00	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,1,1-Trichloroethane	15.3	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,1,2-Trichloroethane	1.2	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,1-Dichloroethane	114	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,1-Dichloroethene	1020	P1	ug/L	20.0	SW846 8260D	20	12/05/2022 01:59	PDK	B
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2-Dichloroethane	7.5	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Chloroethane	2.8	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A



Results

Client Sample ID	MW-24D	Collected	11/21/2022 13:15
Lab Sample ID	3275166013	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
cis-1,2-Dichloroethene	5.5	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Tetrachloroethene	1.3	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Trichloroethene	7.7	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 07:28	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 07:28	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.2%	62 - 133	12/05/2022 01:59	
1,2-Dichloroethane-d4	17060-07-0	97.6%	62 - 133	12/02/2022 07:28	
4-Bromofluorobenzene	460-00-4	102%	79 - 114	12/05/2022 01:59	
4-Bromofluorobenzene	460-00-4	104%	79 - 114	12/02/2022 07:28	
Dibromofluoromethane	1868-53-7	100%	78 - 116	12/05/2022 01:59	
Dibromofluoromethane	1868-53-7	97%	78 - 116	12/02/2022 07:28	
Toluene-d8	2037-26-5	95.5%	76 - 127	12/05/2022 01:59	
Toluene-d8	2037-26-5	96.2%	76 - 127	12/02/2022 07:28	



Results

Client Sample ID	MW-25D-130	Collected	11/21/2022 14:00
Lab Sample ID	3275166014	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	16.1	P1	ug/L	10.0	SW846 8270E SIM	10	12/01/2022 10:27	S7M	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	60.7%	29 – 112	11/29/2022 20:57	
2-Methylnaphthalene-d10	7297-45-2	59.1%	29 – 112	12/01/2022 10:27	
Fluoranthene-d10	93951-69-0	87%	45 – 130	11/29/2022 20:57	
Fluoranthene-d10	93951-69-0	93.2%	45 – 130	12/01/2022 10:27	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,1,1-Trichloroethane	5.6	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,1-Dichloroethane	5.5	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,1-Dichloroethene	80.2	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A



Results

Client Sample ID	MW-25D-130	Collected	11/21/2022 14:00
Lab Sample ID	3275166014	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:33	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:33	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93%	62 - 133	12/02/2022 02:33	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	12/02/2022 02:33	
Dibromofluoromethane	1868-53-7	92.3%	78 - 116	12/02/2022 02:33	
Toluene-d8	2037-26-5	95%	76 - 127	12/02/2022 02:33	



Results

Client Sample ID	MW-25D-190	Collected	11/21/2022 13:45
Lab Sample ID	3275166015	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	10.2	2,3,P1	ug/L	1.0	SW846 8270E SIM	1	11/29/2022 21:24	M10	G

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	70.1%	29 - 112	11/29/2022 21:24	
Fluoranthene-d10	93951-69-0	87%	45 - 130	11/29/2022 21:24	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,1,1-Trichloroethane	3.7	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,1-Dichloroethane	7.3	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,1-Dichloroethene	29.1	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A



Results

Client Sample ID	MW-25D-190	Collected	11/21/2022 13:45
Lab Sample ID	3275166015	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Methyl t-Butyl Ether	1.2	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 02:55	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 02:55	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.8%	62 - 133	12/02/2022 02:55	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	12/02/2022 02:55	
Dibromofluoromethane	1868-53-7	93.4%	78 - 116	12/02/2022 02:55	
Toluene-d8	2037-26-5	95.2%	76 - 127	12/02/2022 02:55	



Results

Client Sample ID	Dup-112122	Collected	11/21/2022 12:10
Lab Sample ID	3275166016	Lab Receipt	11/21/2022 17:40

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	19.1	P1	ug/L	2.5	SW846 8270E SIM	1	11/29/2022 21:50	M1O	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	67%	29 - 112	11/29/2022 21:50	
Fluoranthene-d10	93951-69-0	76.7%	45 - 130	11/29/2022 21:50	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,1,1-Trichloroethane	5.6	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,1-Dichloroethane	5.3	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,1-Dichloroethene	76.2	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Chloroform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A



Results

Client Sample ID	Dup-112122	Collected	11/21/2022 12:10
Lab Sample ID	3275166016	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 03:18	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 03:18	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.4%	62 - 133	12/02/2022 03:18	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	12/02/2022 03:18	
Dibromofluoromethane	1868-53-7	92%	78 - 116	12/02/2022 03:18	
Toluene-d8	2037-26-5	95%	76 - 127	12/02/2022 03:18	



Results

Client Sample ID	Trip Blank-C	Collected	11/21/2022 12:10
Lab Sample ID	3275166017	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Chloroform	1.1	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A



Results

Client Sample ID	Trip Blank-C	Collected	11/21/2022 12:10
Lab Sample ID	3275166017	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 00:39	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 00:39	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.4%	62 – 133	12/02/2022 00:39	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	12/02/2022 00:39	
Dibromofluoromethane	1868-53-7	89.9%	78 – 116	12/02/2022 00:39	
Toluene-d8	2037-26-5	94.4%	76 – 127	12/02/2022 00:39	



Results

Client Sample ID	Trip Blank-D	Collected	11/21/2022 12:10
Lab Sample ID	3275166018	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,1,1-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,1,2,2-Tetrachloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,1,2-Trichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,1-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,1-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,1-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2,3-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2,3-Trichloropropane	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2,4-Trichlorobenzene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2-Dibromo-3-chloropropane	7.0 U	U,P1	ug/L	7.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2-Dibromoethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2-Dichloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,3-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,3-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
1,4-Dichlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
2,2-Dichloropropane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
2-Butanone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
2-Hexanone	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Acetone	10.0 U	U,P1	ug/L	10.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Benzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Bromobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Bromochloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Bromodichloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Bromoform	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Bromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Carbon Tetrachloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Chlorobenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Chlorodibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Chloroethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Chloroform	1.1	P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Chloromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
cis-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
cis-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Dibromomethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Dichlorodifluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Diisopropyl ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Ethylbenzene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Hexachlorobutadiene	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Methyl t-Butyl Ether	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Methylene Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
mp-Xylene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Naphthalene	2.0 U	U,P1	ug/L	2.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
o-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A



Results

Client Sample ID	Trip Blank-D	Collected	11/21/2022 12:10
Lab Sample ID	3275166018	Lab Receipt	11/21/2022 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
o-Xylene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
p-Chlorotoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
p-Isopropyltoluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Styrene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Tetrachloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Toluene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Total Xylenes	3.0 U	U,P1	ug/L	3.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
trans-1,2-Dichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
trans-1,3-Dichloropropene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Trichloroethene	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Trichlorofluoromethane	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Vinyl Acetate	5.0 U	U,P1	ug/L	5.0	SW846 8260D	1	12/02/2022 01:02	PDK	A
Vinyl Chloride	1.0 U	U,P1	ug/L	1.0	SW846 8260D	1	12/02/2022 01:02	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.7%	62 - 133	12/02/2022 01:02	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	12/02/2022 01:02	
Dibromofluoromethane	1868-53-7	92.4%	78 - 116	12/02/2022 01:02	
Toluene-d8	2037-26-5	94.6%	76 - 127	12/02/2022 01:02	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3275166001	MW-34D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166002	MW-35D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166003	MW-33D-235	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166004	MW-33D-295	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166005	MW-31D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166006	MW-29D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166007	MW-30D-273	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166008	MW-30D-413	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166009	MW-32D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166010	MW-28D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166011	MW-36D	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166012	MW-45	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166013	MW-24D	SW846 8270E SIM SW846 8260D SW846 8260D	SW846 3510C N/A N/A	
3275166014	MW-25D-130	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166015	MW-25D-190	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166016	Dup-112122	SW846 8270E SIM SW846 8260D	SW846 3510C N/A	
3275166017	Trip Blank-C	SW846 8260D	N/A	
3275166018	Trip Blank-D	SW846 8260D	N/A	



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM

QC Batch			
QC Batch	912308	Prep Method	SW846 3510C
Date	11/25/2022 06:25	Analysis Method	SW846 8270E SIM
Tech.	MXL		

Associated Samples			
3275166003	3275166004	3275166005	3275166001
3275166006	3275166002	3275166007	

Matrix Spike 3591159 (MS) 3275168012 (non-Project Sample) For QC Batch 912308

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

RESULTS

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	MS	1.30	1.10	1	14.2*	22 - 75		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	MS	0.79	1	78.8	29 - 112	
Fluoranthene-d10	93951-69-0	MS	0.97	1	97.3	45 - 130	

Duplicate 3591160 (DUP) 3275168014 (non-Project Sample) For QC Batch 912308

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

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Qualifiers
1,4-Dioxane	123-91-1	DUP	62.8599	59.6334	RPD <u>5.27</u> (Max-30)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnaphthalene-d10	7297-45-2	DUP	0.72	1	71.7	29 - 112	
2-Methylnaphthalene-d10	7297-45-2	DUP	0	1	0*	29 - 112	
Fluoranthene-d10	93951-69-0	DUP	0.87	1	86.8	45 - 130	
Fluoranthene-d10	93951-69-0	DUP	0	1	0*	45 - 130	

Method Blank 3591157 (MB) Created on 11/23/2022 08:33 For QC Batch 912308

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,4-Dioxane	123-91-1	BLK	1.0	ug/L	1.0	U



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	BLK	0.75	1	75.4	29 - 112	
Fluoranthene-d10	93951-69-0	BLK	1.10	1	108	45 - 130	

Lab Control Standard 3591158 (LCS) Created on 11/23/2022 08:33 For QC Batch 912308

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	55.3	22 - 75		U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	LCS	0.78	1	78.2	29 - 112	
Fluoranthene-d10	93951-69-0	LCS	0.99	1	99	45 - 130	

QC Batch		Prep Method	
QC Batch	913853	SW846	3510C
Date	11/28/2022 10:50	Analysis Method	SW846 8270E SIM
Tech.	LDC		

Associated Samples

3275166014	3275166015	3275166011	3275166012
3275166008	3275166009	3275166013	3275166010
3275166016			

Method Blank 3591831 (MB) Created on 11/28/2022 08:00 For QC Batch 913853

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,4-Dioxane	123-91-1	BLK	1.0	ug/L	1.0	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	BLK	0.77	1	76.9	29 - 112	
Fluoranthene-d10	93951-69-0	BLK	1.10	1	108	45 - 130	

Lab Control Standard 3591832 (LCS) Created on 11/28/2022 08:00 For QC Batch 913853

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	0.63		1	62.9	22 - 75		U



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	LCS	0.78	1	77.8	29 - 112	
Fluoranthene-d10	93951-69-0	LCS	1	1	104	45 - 130	

Matrix Spike 3591833 (MS) 3275166015 For QC Batch 913853

****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 3591834 (MSD) 3275166015 For QC Batch 913853

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	MS	12.10	10.20	1	NC	22 - 75		
1,4-Dioxane	123-91-1	MSD	11.50	10.20	1	NC	22 - 75	RPD <u>5.47</u> (Max-30)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	MS	0.79	1	76.3	29 - 112	
2-Methylnapthalene-d10	7297-45-2	MSD	0.75	1	75.1	29 - 112	
Fluoranthene-d10	93951-69-0	MS	0.92	1	88.3	45 - 130	
Fluoranthene-d10	93951-69-0	MSD	0.97	1	96.6	45 - 130	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS

QC Batch			
QC Batch	915259	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

Associated Samples			
3275166003	3275166004	3275166005	3275166001
3275166006	3275166002	3275166007	3275166008
3275166009			

Method Blank 3594076 (MB) Created on 12/01/2022 10:21 For QC Batch 915259

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
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



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
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	26.50	30	88.2	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	30.90	30	103	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	26	30	86.6	78 - 116	
Toluene-d8	2037-26-5	BLK	27.60	30	91.9	76 - 127	

Lab Control Standard 3594077 (LCS) Created on 12/01/2022 10:21 For QC Batch 915259

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	21.10		20	105	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	20.90		20	105	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	20.70		20	103	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20.40		20	102	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	20.30		20	101	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.20		20	106	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	21.10		20	105	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	20.20		20	101	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	20.50		20	102	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	20.40		20	102	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	18.90		20	94.7	59 - 133		



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-Dibromoethane	106-93-4	LCS	20.50		20	102	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	19.70		20	98.4	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	19.90		20	99.7	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	20.30		20	102	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	20.30		20	101	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	20		20	100	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	20.10		20	100	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	22.70		20	113	64 - 129		
2-Butanone	78-93-3	LCS	109		100	109	50 - 152		
2-Hexanone	591-78-6	LCS	111		100	111	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	111		100	111	71 - 146		
Acetone	67-64-1	LCS	104		100	104	40 - 151		
Benzene	71-43-2	LCS	20.60		20	103	80 - 124		
Bromobenzene	108-86-1	LCS	20.90		20	104	81 - 119		
Bromochloromethane	74-97-5	LCS	20		20	100	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.30		20	102	79 - 126		
Bromoform	75-25-2	LCS	20.20		20	101	70 - 123		
Bromomethane	74-83-9	LCS	20.40		20	102	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	21.30		20	107	62 - 132		
Chlorobenzene	108-90-7	LCS	20.30		20	102	85 - 117		
Chlorodibromomethane	124-48-1	LCS	20.80		20	104	77 - 122		
Chloroethane	75-00-3	LCS	21.80		20	109	51 - 142		
Chloroform	67-66-3	LCS	20.50		20	103	78 - 122		
Chloromethane	74-87-3	LCS	22.20		20	111	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	20.70		20	103	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.60		20	103	81 - 121		
Dibromomethane	74-95-3	LCS	19.90		20	99.3	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	25.50		20	127	17 - 166		
Diisopropyl ether	108-20-3	LCS	20.90		20	104	74 - 131		
Ethylbenzene	100-41-4	LCS	20.70		20	104	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	21.10		20	106	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	21		20	105	69 - 115		
Methylene Chloride	75-09-2	LCS	19.60		20	97.9	76 - 121		
mp-Xylene	108383/106423	LCS	42.50		40	106	79 - 125		
Naphthalene	91-20-3	LCS	16.30		20	81.5	56 - 134		
o-Chlorotoluene	95-49-8	LCS	21.70		20	108	78 - 126		
o-Xylene	95-47-6	LCS	20.60		20	103	79 - 124		
p-Chlorotoluene	106-43-4	LCS	21.40		20	107	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	22.80		20	114	72 - 123		
Styrene	100-42-5	LCS	22		20	110	79 - 123		
Tetrachloroethene	127-18-4	LCS	20.10		20	101	72 - 124		
Toluene	108-88-3	LCS	20.90		20	104	80 - 125		
Total Xylenes	1330-20-7	LCS	63.10		60	105	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.70		20	104	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21.30		20	106	78 - 126		
Trichloroethene	79-01-6	LCS	19		20	94.8	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	21		20	105	38 - 123		



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
Vinyl Acetate	108-05-4	LCS	19.70		20	98.5	58 - 136		
Vinyl Chloride	75-01-4	LCS	22.80		20	114	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	28.10	30	93.8	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	31.10	30	104	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	27.30	30	90.9	78 - 116	
Toluene-d8	2037-26-5	LCS	27.70	30	92.3	76 - 127	

QC Batch

QC Batch	915795	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

Associated Samples

3275166013	3275166014	3275166015	3275166010
3275166011	3275166012	3275166016	3275166017
3275166018			

Method Blank 3594420 (MB) Created on 12/01/2022 23:48 For QC Batch 915795

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
1,2,4-Trichlorobenzene	120-82-1	BLK	2.0	ug/L	2.0	U
1,2-Dibromo-3-chloropropane	96-12-8	BLK	7.0	ug/L	7.0	U
1,2-Dibromoethane	106-93-4	BLK	1.0	ug/L	1.0	U
1,2-Dichlorobenzene	95-50-1	BLK	1.0	ug/L	1.0	U
1,2-Dichloroethane	107-06-2	BLK	1.0	ug/L	1.0	U
1,2-Dichloropropane	78-87-5	BLK	1.0	ug/L	1.0	U
1,3-Dichlorobenzene	541-73-1	BLK	1.0	ug/L	1.0	U
1,3-Dichloropropane	142-28-9	BLK	1.0	ug/L	1.0	U
1,4-Dichlorobenzene	106-46-7	BLK	1.0	ug/L	1.0	U
2,2-Dichloropropane	594-20-7	BLK	1.0	ug/L	1.0	U
2-Butanone	78-93-3	BLK	10.0	ug/L	10.0	U
2-Hexanone	591-78-6	BLK	5.0	ug/L	5.0	U
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	5.0	ug/L	5.0	U
Acetone	67-64-1	BLK	10.0	ug/L	10.0	U



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No	Result	Units	RDL	Qualifiers
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
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 27.90	30	92.9	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK 30.40	30	101	79 - 114	
Dibromofluoromethane	1868-53-7	BLK 27.20	30	90.8	78 - 116	
Toluene-d8	2037-26-5	BLK 28.20	30	93.9	76 - 127	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

Lab Control Standard

3594421 (LCS)

Created on 12/01/2022 23:48

For QC Batch 915795

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	20.30		20	101	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	20.20		20	101	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	19.60		20	98.1	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	19.80		20	98.9	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	19.70		20	98.3	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	20.70		20	103	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	20.30		20	101	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	20.10		20	101	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	19.10		20	95.7	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	21		20	105	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	17.30		20	86.6	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	19.40		20	97.1	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	19.70		20	98.3	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	18.70		20	93.7	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	19.70		20	98.7	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	20.10		20	100	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	19.30		20	96.4	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	20.20		20	101	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	20.10		20	101	64 - 129		
2-Butanone	78-93-3	LCS	90.40		100	90.4	50 - 152		
2-Hexanone	591-78-6	LCS	96.80		100	96.8	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	99.40		100	99.4	71 - 146		
Acetone	67-64-1	LCS	86.60		100	86.6	40 - 151		
Benzene	71-43-2	LCS	20.20		20	101	80 - 124		
Bromobenzene	108-86-1	LCS	20.60		20	103	81 - 119		
Bromochloromethane	74-97-5	LCS	19.30		20	96.6	73 - 117		
Bromodichloromethane	75-27-4	LCS	19.60		20	98	79 - 126		
Bromoform	75-25-2	LCS	18.90		20	94.6	70 - 123		
Bromomethane	74-83-9	LCS	21.90		20	110	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	20.70		20	104	62 - 132		
Chlorobenzene	108-90-7	LCS	19.90		20	99.5	85 - 117		
Chlorodibromomethane	124-48-1	LCS	19.60		20	98.2	77 - 122		
Chloroethane	75-00-3	LCS	22.70		20	113	51 - 142		
Chloroform	67-66-3	LCS	19.70		20	98.4	78 - 122		
Chloromethane	74-87-3	LCS	21.20		20	106	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	19.80		20	99	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	19.60		20	98.1	81 - 121		
Dibromomethane	74-95-3	LCS	18.80		20	93.8	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	24.30		20	121	17 - 166		
Diisopropyl ether	108-20-3	LCS	20.20		20	101	74 - 131		
Ethylbenzene	100-41-4	LCS	20.70		20	103	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	22.80		20	114	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	19.50		20	97.3	69 - 115		
Methylene Chloride	75-09-2	LCS	19		20	94.9	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	41.60		40	104	79 - 125		
Naphthalene	91-20-3	LCS	16		20	80.2	56 - 134		
o-Chlorotoluene	95-49-8	LCS	21.50		20	107	78 - 126		
o-Xylene	95-47-6	LCS	20.40		20	102	79 - 124		
p-Chlorotoluene	106-43-4	LCS	21.40		20	107	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	22.70		20	114	72 - 123		
Styrene	100-42-5	LCS	21.90		20	110	79 - 123		
Tetrachloroethene	127-18-4	LCS	20.30		20	101	72 - 124		
Toluene	108-88-3	LCS	20.40		20	102	80 - 125		
Total Xylenes	1330-20-7	LCS	62		60	103	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.30		20	102	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	20.60		20	103	78 - 126		
Trichloroethene	79-01-6	LCS	20.20		20	101	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	20.60		20	103	38 - 123		
Vinyl Acetate	108-05-4	LCS	15.80		20	79.2	58 - 136		
Vinyl Chloride	75-01-4	LCS	22.10		20	111	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	28.10	30	93.5	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	30.30	30	101	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	27.70	30	92.3	78 - 116	
Toluene-d8	2037-26-5	LCS	28.40	30	94.7	76 - 127	

Matrix Spike 3594440 (MS) 3275166015 For QC Batch 915795

****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 3594441 (MSD) 3275166015 For QC Batch 915795

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	20.70	0	20	104	78 - 121		
1,1,1,2-Tetrachloroethane	630-20-6	MSD	20.80	0	20	104	78 - 121	RPD 0.43 (Max-16)	
1,1,1-Trichloroethane	71-55-6	MS	24.10	3.70	20	102	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	23.60	3.70	20	99.7	66 - 130	RPD 1.84 (Max-20)	
1,1,2,2-Tetrachloroethane	79-34-5	MS	19.20	0	20	96.2	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	19.30	0	20	96.5	74 - 135	RPD 0.30 (Max-16)	
1,1,2-Trichloroethane	79-00-5	MS	19.50	0	20	97.4	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	19.80	0	20	98.9	82 - 126	RPD 1.51 (Max-15)	
1,1-Dichloroethane	75-34-3	MS	25.20	7.30	20	90	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	25.40	7.30	20	90.5	78 - 124	RPD 0.43 (Max-15)	
1,1-Dichloroethane	75-35-4	MS	46.90	29.10	20	88.8	63 - 128		



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
1,1-Dichloroethene	75-35-4	MSD	44.90	29.10	20	79	63 - 128	RPD 4.27 (Max-21)	
1,1-Dichloropropene	563-58-6	MS	19.70	0	20	98.7	76 - 126		
1,1-Dichloropropene	563-58-6	MSD	19.70	0	20	98.7	76 - 126	RPD 0.0020 (Max-16)	
1,2,3-Trichlorobenzene	87-61-6	MS	17.90	0	20	89.5	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	19.70	0	20	98.5	61 - 126	RPD 9.55 (Max-36)	
1,2,3-Trichloropropane	96-18-4	MS	19.10	0	20	95.5	75 - 132		
1,2,3-Trichloropropane	96-18-4	MSD	18.80	0	20	94	75 - 132	RPD 1.63 (Max-19)	
1,2,4-Trichlorobenzene	120-82-1	MS	17.60	0	20	87.8	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	19	0	20	95	67 - 123	RPD 7.97 (Max-22)	
1,2-Dibromo-3-chloropropane	96-12-8	MS	16.80	0	20	84	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	17.10	0	20	85.5	59 - 133	RPD 1.77 (Max-26)	
1,2-Dibromoethane	106-93-4	MS	19.70	0	20	98.4	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	19.90	0	20	99.4	80 - 124	RPD 1 (Max-19)	
1,2-Dichlorobenzene	95-50-1	MS	19	0	20	94.8	82 - 118		
1,2-Dichlorobenzene	95-50-1	MSD	19.20	0	20	95.8	82 - 118	RPD 1.13 (Max-15)	
1,2-Dichloroethane	107-06-2	MS	19	0.39	20	93.2	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	19.30	0.39	20	94.4	70 - 133	RPD 1.25 (Max-19)	
1,2-Dichloropropane	78-87-5	MS	18.40	0	20	91.9	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	18.70	0	20	93.5	81 - 127	RPD 1.66 (Max-15)	
1,3-Dichlorobenzene	541-73-1	MS	19.40	0	20	97.1	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	19.10	0	20	95.6	81 - 118	RPD 1.59 (Max-16)	
1,3-Dichloropropane	142-28-9	MS	19	0	20	94.9	82 - 126		
1,3-Dichloropropane	142-28-9	MSD	19.30	0	20	96.3	82 - 126	RPD 1.45 (Max-15)	
1,4-Dichlorobenzene	106-46-7	MS	19.40	0	20	96.9	81 - 116		
1,4-Dichlorobenzene	106-46-7	MSD	19.30	0	20	96.5	81 - 116	RPD 0.39 (Max-15)	
2,2-Dichloropropane	594-20-7	MS	20	0	20	100	64 - 129		
2,2-Dichloropropane	594-20-7	MSD	19.70	0	20	98.4	64 - 129	RPD 1.75 (Max-18)	
2-Butanone	78-93-3	MS	88.60	0	100	88.6	50 - 152		
2-Butanone	78-93-3	MSD	90.10	0	100	90.1	50 - 152	RPD 1.69 (Max-16)	
2-Hexanone	591-78-6	MS	95.60	0	100	95.6	65 - 154		
2-Hexanone	591-78-6	MSD	96.30	0	100	96.3	65 - 154	RPD 0.80 (Max-17)	
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	96.40	0	100	96.4	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	98	0	100	98	71 - 146	RPD 1.64 (Max-16)	
Acetone	67-64-1	MS	77.80	0	100	77.8	40 - 151		
Acetone	67-64-1	MSD	81.90	0	100	81.9	40 - 151	RPD 5.22 (Max-40)	
Benzene	71-43-2	MS	19.20	0	20	96	80 - 124		
Benzene	71-43-2	MSD	19	0	20	95.1	80 - 124	RPD 0.90 (Max-26)	
Bromobenzene	108-86-1	MS	20.10	0	20	100	81 - 119		
Bromobenzene	108-86-1	MSD	20.10	0	20	101	81 - 119	RPD 0.06 (Max-17)	
Bromochloromethane	74-97-5	MS	19.90	0	20	99.4	73 - 117		
Bromochloromethane	74-97-5	MSD	20.10	0	20	101	73 - 117	RPD 1.28 (Max-19)	
Bromodichloromethane	75-27-4	MS	19.50	0	20	97.3	79 - 126		
Bromodichloromethane	75-27-4	MSD	19.50	0	20	97.7	79 - 126	RPD 0.42 (Max-16)	
Bromoform	75-25-2	MS	19.10	0	20	95.6	70 - 123		
Bromoform	75-25-2	MSD	19.20	0	20	95.8	70 - 123	RPD 0.13 (Max-16)	
Bromomethane	74-83-9	MS	17.60	0	20	88	45 - 148		
Bromomethane	74-83-9	MSD	19.60	0	20	97.9	45 - 148	RPD 10.60 (Max-26)	
Carbon Tetrachloride	56-23-5	MS	20.90	0	20	104	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	20.90	0	20	104	62 - 132	RPD 0.05 (Max-17)	



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
Chlorobenzene	108-90-7	MS	19.90	0	20	99.3	85 - 117		
Chlorobenzene	108-90-7	MSD	19.60	0	20	98.1	85 - 117	RPD	<u>1.18</u> (Max-15)
Chlorodibromomethane	124-48-1	MS	20.10	0	20	100	77 - 122		
Chlorodibromomethane	124-48-1	MSD	20.50	0	20	102	77 - 122	RPD	<u>2.05</u> (Max-15)
Chloroethane	75-00-3	MS	22	0	20	110	51 - 142		
Chloroethane	75-00-3	MSD	21.10	0	20	106	51 - 142	RPD	<u>4.09</u> (Max-24)
Chloroform	67-66-3	MS	19	0	20	94.8	78 - 122		
Chloroform	67-66-3	MSD	19.30	0	20	96.5	78 - 122	RPD	<u>1.80</u> (Max-16)
Chloromethane	74-87-3	MS	21.20	0	20	106	38 - 156		
Chloromethane	74-87-3	MSD	21.30	0	20	106	38 - 156	RPD	<u>0.43</u> (Max-27)
cis-1,2-Dichloroethene	156-59-2	MS	18.70	0	20	93.7	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	19	0	20	94.8	78 - 125	RPD	<u>1.10</u> (Max-21)
cis-1,3-Dichloropropene	10061-01-5	MS	18.80	0	20	94	81 - 121		
cis-1,3-Dichloropropene	10061-01-5	MSD	19.10	0	20	95.6	81 - 121	RPD	<u>1.74</u> (Max-16)
Dibromomethane	74-95-3	MS	19	0	20	94.8	81 - 125		
Dibromomethane	74-95-3	MSD	19.60	0	20	98.2	81 - 125	RPD	<u>3.54</u> (Max-16)
Dichlorodifluoromethane	75-71-8	MS	27.40	0	20	137	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	26.40	0	20	132	17 - 166	RPD	<u>3.69</u> (Max-24)
Diisopropyl ether	108-20-3	MS	17.90	0	20	89.7	74 - 131		
Diisopropyl ether	108-20-3	MSD	18.50	0	20	92.3	74 - 131	RPD	<u>2.84</u> (Max-15)
Ethylbenzene	100-41-4	MS	20.40	0	20	102	80 - 124		
Ethylbenzene	100-41-4	MSD	20.10	0	20	100	80 - 124	RPD	<u>1.62</u> (Max-19)
Hexachlorobutadiene	87-68-3	MS	19.10	0	20	95.4	55 - 128		
Hexachlorobutadiene	87-68-3	MSD	19.60	0	20	98.1	55 - 128	RPD	<u>2.76</u> (Max-35)
Methyl t-Butyl Ether	1634-04-4	MS	19.90	1.20	20	94	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	20.50	1.20	20	96.7	69 - 115	RPD	<u>2.75</u> (Max-20)
Methylene Chloride	75-09-2	MS	18.20	0	20	90.8	76 - 121		
Methylene Chloride	75-09-2	MSD	18.60	0	20	92.8	76 - 121	RPD	<u>2.24</u> (Max-17)
mp-Xylene	108383/106423	MS	41.20	0	40	103	79 - 125		
mp-Xylene	108383/106423	MSD	40.60	0	40	101	79 - 125	RPD	<u>1.45</u> (Max-21)
Naphthalene	91-20-3	MS	13.20	0	20	66.2	56 - 134		
Naphthalene	91-20-3	MSD	14	0	20	69.8	56 - 134	RPD	<u>5.33</u> (Max-40)
o-Chlorotoluene	95-49-8	MS	20.20	0	20	101	78 - 126		
o-Chlorotoluene	95-49-8	MSD	20.30	0	20	101	78 - 126	RPD	<u>0.26</u> (Max-17)
o-Xylene	95-47-6	MS	20.20	0	20	101	79 - 124		
o-Xylene	95-47-6	MSD	19.90	0	20	99.4	79 - 124	RPD	<u>1.47</u> (Max-19)
p-Chlorotoluene	106-43-4	MS	20	0	20	100	78 - 125		
p-Chlorotoluene	106-43-4	MSD	20	0	20	100	78 - 125	RPD	<u>0.15</u> (Max-16)
p-Isopropyltoluene	99-87-6	MS	21.30	0	20	106	72 - 123		
p-Isopropyltoluene	99-87-6	MSD	22.50	0	20	113	72 - 123	RPD	<u>5.65</u> (Max-17)
Styrene	100-42-5	MS	20.80	0	20	104	79 - 123		
Styrene	100-42-5	MSD	20.60	0	20	103	79 - 123	RPD	<u>1.09</u> (Max-16)
Tetrachloroethene	127-18-4	MS	19.40	0	20	97.2	72 - 124		
Tetrachloroethene	127-18-4	MSD	19.10	0	20	95.6	72 - 124	RPD	<u>1.71</u> (Max-38)
Toluene	108-88-3	MS	20	0	20	100	80 - 125		
Toluene	108-88-3	MSD	19.80	0	20	98.8	80 - 125	RPD	<u>1.46</u> (Max-20)
Total Xylenes	1330-20-7	MS	61.30	0	60	102	79 - 125		
Total Xylenes	1330-20-7	MSD	60.50	0	60	101	79 - 125	RPD	<u>1.45</u> (Max-35)



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
trans-1,2-Dichloroethene	156-60-5	MS	19	0	20	94.8	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	18.60	0	20	93	71 - 122	RPD <u>1.93</u> (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	19.90	0	20	99.5	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	20.20	0	20	101	78 - 126	RPD <u>1.56</u> (Max-18)	
Trichloroethene	79-01-6	MS	19.50	0	20	97.4	77 - 124		
Trichloroethene	79-01-6	MSD	19.40	0	20	97	77 - 124	RPD <u>0.46</u> (Max-18)	
Trichlorofluoromethane	75-69-4	MS	22.40	0	20	112	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	22.10	0	20	111	38 - 123	RPD <u>1.26</u> (Max-23)	
Vinyl Acetate	108-05-4	MS	16.50	0	20	82.7	58 - 136		
Vinyl Acetate	108-05-4	MSD	16.70	0	20	83.5	58 - 136	RPD <u>1.06</u> (Max-17)	
Vinyl Chloride	75-01-4	MS	22.80	0	20	114	27 - 138		
Vinyl Chloride	75-01-4	MSD	21.90	0	20	110	27 - 138	RPD <u>3.87</u> (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	28.80	30	96	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	28.90	30	96.3	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	30.20	30	101	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	30.10	30	100	79 - 114	
Dibromofluoromethane	1868-53-7	MS	28.40	30	94.6	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	28.90	30	96.4	78 - 116	
Toluene-d8	2037-26-5	MS	28.30	30	94.3	76 - 127	
Toluene-d8	2037-26-5	MSD	28.30	30	94.2	76 - 127	

QC Batch

Associated Samples

QC Batch	916914	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

3275166013

Matrix Spike 3595075 (MS) 3276423001 (non-Project Sample) For QC Batch 916914

****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 3595076 (MSD) 3276423001 (non-Project Sample) For QC Batch 916914

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	22.80	0	20	114	78 - 121		
1,1,1,2-Tetrachloroethane	630-20-6	MSD	22	0	20	110	78 - 121	RPD <u>3.57</u> (Max-16)	
1,1,1-Trichloroethane	71-55-6	MS	23.60	0	20	118	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	22.50	0	20	113	66 - 130	RPD <u>4.74</u> (Max-20)	



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
1,1,2,2-Tetrachloroethane	79-34-5	MS	18.30	0	20	91.7	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	18.20	0	20	90.8	74 - 135	RPD	<u>1.05</u> (Max-16)
1,1,2-Trichloroethane	79-00-5	MS	20.50	0	20	102	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	20.40	0	20	102	82 - 126	RPD	<u>0.48</u> (Max-15)
1,1-Dichloroethane	75-34-3	MS	20.90	0	20	104	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	19.80	0	20	99.1	78 - 124	RPD	<u>5.17</u> (Max-15)
1,1-Dichloroethene	75-35-4	MS	21	0	20	105	63 - 128		
1,1-Dichloroethene	75-35-4	MSD	18.90	0	20	94.3	63 - 128	RPD	<u>10.70</u> (Max-21)
1,1-Dichloropropene	563-58-6	MS	22.70	0	20	113	76 - 126		
1,1-Dichloropropene	563-58-6	MSD	21.30	0	20	107	76 - 126	RPD	<u>5.97</u> (Max-16)
1,2,3-Trichlorobenzene	87-61-6	MS	18.70	0	20	93.3	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	19.60	0	20	98.2	61 - 126	RPD	<u>5.21</u> (Max-36)
1,2,3-Trichloropropane	96-18-4	MS	19.40	0	20	96.8	75 - 132		
1,2,3-Trichloropropane	96-18-4	MSD	18.70	0	20	93.7	75 - 132	RPD	<u>3.31</u> (Max-19)
1,2,4-Trichlorobenzene	120-82-1	MS	18.90	0	20	94.3	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	18.60	0	20	93	67 - 123	RPD	<u>1.44</u> (Max-22)
1,2-Dibromo-3-chloropropane	96-12-8	MS	15.60	0	20	78	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	16.20	0	20	80.9	59 - 133	RPD	<u>3.58</u> (Max-26)
1,2-Dibromoethane	106-93-4	MS	20.60	0	20	103	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	21.10	0	20	105	80 - 124	RPD	<u>2.37</u> (Max-19)
1,2-Dichlorobenzene	95-50-1	MS	19.70	0	20	98.3	82 - 118		
1,2-Dichlorobenzene	95-50-1	MSD	19.40	0	20	96.8	82 - 118	RPD	<u>1.62</u> (Max-15)
1,2-Dichloroethane	107-06-2	MS	21.30	0	20	107	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	21.10	0	20	106	70 - 133	RPD	<u>0.96</u> (Max-19)
1,2-Dichloropropane	78-87-5	MS	20	0	20	99.8	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	19.60	0	20	98.1	81 - 127	RPD	<u>1.68</u> (Max-15)
1,3-Dichlorobenzene	541-73-1	MS	20.10	0	20	100	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	19.80	0	20	99.1	81 - 118	RPD	<u>1.34</u> (Max-16)
1,3-Dichloropropane	142-28-9	MS	19.50	0	20	97.6	82 - 126		
1,3-Dichloropropane	142-28-9	MSD	19.60	0	20	98.2	82 - 126	RPD	<u>0.60</u> (Max-15)
1,4-Dichlorobenzene	106-46-7	MS	20.20	0	20	101	81 - 116		
1,4-Dichlorobenzene	106-46-7	MSD	19.40	0	20	97.1	81 - 116	RPD	<u>3.92</u> (Max-15)
2,2-Dichloropropane	594-20-7	MS	23.30	0	20	116	64 - 129		
2,2-Dichloropropane	594-20-7	MSD	21.70	0	20	108	64 - 129	RPD	<u>7.27</u> (Max-18)
2-Butanone	78-93-3	MS	95.40	0	100	95.4	50 - 152		
2-Butanone	78-93-3	MSD	96.10	0	100	96.1	50 - 152	RPD	<u>0.78</u> (Max-16)
2-Hexanone	591-78-6	MS	87.70	0	100	87.7	65 - 154		
2-Hexanone	591-78-6	MSD	86	0	100	86	65 - 154	RPD	<u>2.02</u> (Max-17)
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	89.60	0	100	89.6	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	91.90	0	100	91.9	71 - 146	RPD	<u>2.57</u> (Max-16)
Acetone	67-64-1	MS	83.80	0	100	83.8	40 - 151		
Acetone	67-64-1	MSD	78.40	0	100	78.4	40 - 151	RPD	<u>6.58</u> (Max-40)
Benzene	71-43-2	MS	21.80	0	20	109	80 - 124		
Benzene	71-43-2	MSD	20.80	0	20	104	80 - 124	RPD	<u>4.45</u> (Max-26)
Bromobenzene	108-86-1	MS	21.60	0	20	108	81 - 119		
Bromobenzene	108-86-1	MSD	20.70	0	20	103	81 - 119	RPD	<u>4.72</u> (Max-17)
Bromochloromethane	74-97-5	MS	23.50	0	20	118*	73 - 117		
Bromochloromethane	74-97-5	MSD	23.10	0	20	115	73 - 117	RPD	<u>2.06</u> (Max-19)
Bromodichloromethane	75-27-4	MS	22	0	20	110	79 - 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
Bromodichloromethane	75-27-4	MSD	21.80	0	20	109	79 - 126	RPD <u>0.65</u> (Max-16)	
Bromoform	75-25-2	MS	19.30	0	20	96.5	70 - 123		
Bromoform	75-25-2	MSD	19.80	0	20	99.1	70 - 123	RPD <u>2.59</u> (Max-16)	
Bromomethane	74-83-9	MS	19.80	0	20	99	45 - 148		
Bromomethane	74-83-9	MSD	20.50	0	20	102	45 - 148	RPD <u>3.42</u> (Max-26)	
Carbon Tetrachloride	56-23-5	MS	24.70	0	20	124	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	23	0	20	115	62 - 132	RPD <u>7.15</u> (Max-17)	
Chlorobenzene	108-90-7	MS	21.50	0	20	107	85 - 117		
Chlorobenzene	108-90-7	MSD	20.30	0	20	102	85 - 117	RPD <u>5.43</u> (Max-15)	
Chlorodibromomethane	124-48-1	MS	22.10	0	20	110	77 - 122		
Chlorodibromomethane	124-48-1	MSD	21.80	0	20	109	77 - 122	RPD <u>1.23</u> (Max-15)	
Chloroethane	75-00-3	MS	21.40	0	20	107	51 - 142		
Chloroethane	75-00-3	MSD	19.90	0	20	99.7	51 - 142	RPD <u>6.98</u> (Max-24)	
Chloroform	67-66-3	MS	21.90	0	20	109	78 - 122		
Chloroform	67-66-3	MSD	21.10	0	20	106	78 - 122	RPD <u>3.64</u> (Max-16)	
Chloromethane	74-87-3	MS	20	0	20	100	38 - 156		
Chloromethane	74-87-3	MSD	19	0	20	95.2	38 - 156	RPD <u>5.16</u> (Max-27)	
cis-1,2-Dichloroethene	156-59-2	MS	21.20	0	20	106	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	20.40	0	20	102	78 - 125	RPD <u>3.74</u> (Max-21)	
cis-1,3-Dichloropropene	10061-01-5	MS	19.70	0	20	98.4	81 - 121		
cis-1,3-Dichloropropene	10061-01-5	MSD	19.10	0	20	95.6	81 - 121	RPD <u>2.84</u> (Max-16)	
Dibromomethane	74-95-3	MS	21.70	0	20	109	81 - 125		
Dibromomethane	74-95-3	MSD	21.30	0	20	106	81 - 125	RPD <u>1.95</u> (Max-16)	
Dichlorodifluoromethane	75-71-8	MS	28.20	0	20	141	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	26.20	0	20	131	17 - 166	RPD <u>7.28</u> (Max-24)	
Diisopropyl ether	108-20-3	MS	19.20	0	20	95.8	74 - 131		
Diisopropyl ether	108-20-3	MSD	18.50	0	20	92.5	74 - 131	RPD <u>3.48</u> (Max-15)	
Ethylbenzene	100-41-4	MS	22.10	0	20	110	80 - 124		
Ethylbenzene	100-41-4	MSD	20.70	0	20	104	80 - 124	RPD <u>6.26</u> (Max-19)	
Hexachlorobutadiene	87-68-3	MS	21	0	20	105	55 - 128		
Hexachlorobutadiene	87-68-3	MSD	20	0	20	100	55 - 128	RPD <u>4.74</u> (Max-35)	
Methyl t-Butyl Ether	1634-04-4	MS	21.20	0	20	106	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	20.70	0	20	104	69 - 115	RPD <u>2.35</u> (Max-20)	
Methylene Chloride	75-09-2	MS	21	0	20	105	76 - 121		
Methylene Chloride	75-09-2	MSD	19.50	0	20	97.3	76 - 121	RPD <u>7.88</u> (Max-17)	
mp-Xylene	108383/106423	MS	44.70	0	40	112	79 - 125		
mp-Xylene	108383/106423	MSD	42.10	0	40	105	79 - 125	RPD <u>5.96</u> (Max-21)	
Naphthalene	91-20-3	MS	12.90	0	20	64.7	56 - 134		
Naphthalene	91-20-3	MSD	13.30	0	20	66.5	56 - 134	RPD <u>2.77</u> (Max-40)	
o-Chlorotoluene	95-49-8	MS	20.60	0	20	103	78 - 126		
o-Chlorotoluene	95-49-8	MSD	19.80	0	20	99.2	78 - 126	RPD <u>3.66</u> (Max-17)	
o-Xylene	95-47-6	MS	20.70	0	20	103	79 - 124		
o-Xylene	95-47-6	MSD	20.90	0	20	105	79 - 124	RPD <u>1.32</u> (Max-19)	
p-Chlorotoluene	106-43-4	MS	20.40	0	20	102	78 - 125		
p-Chlorotoluene	106-43-4	MSD	19.30	0	20	96.6	78 - 125	RPD <u>5.52</u> (Max-16)	
p-Isopropyltoluene	99-87-6	MS	22.40	0	20	112	72 - 123		
p-Isopropyltoluene	99-87-6	MSD	22.30	0	20	111	72 - 123	RPD <u>0.68</u> (Max-17)	
Styrene	100-42-5	MS	20	0	20	99.8	79 - 123		
Styrene	100-42-5	MSD	20.20	0	20	101	79 - 123	RPD <u>1.02</u> (Max-16)	



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
Tetrachloroethene	127-18-4	MS	22	0	20	110	72 - 124		
Tetrachloroethene	127-18-4	MSD	20.90	0	20	105	72 - 124	RPD <u>4.85</u> (Max-38)	
Toluene	108-88-3	MS	21.10	0	20	106	80 - 125		
Toluene	108-88-3	MSD	20.50	0	20	103	80 - 125	RPD <u>2.85</u> (Max-20)	
Total Xylenes	1330-20-7	MS	65.30	0	60	109	79 - 125		
Total Xylenes	1330-20-7	MSD	63	0	60	105	79 - 125	RPD <u>3.60</u> (Max-35)	
trans-1,2-Dichloroethene	156-60-5	MS	21.50	0	20	107	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	19.20	0	20	96	71 - 122	RPD <u>11.20</u> (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	20.70	0	20	103	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	20.80	0	20	104	78 - 126	RPD <u>0.44</u> (Max-18)	
Trichloroethene	79-01-6	MS	22.70	0.72	20	110	77 - 124		
Trichloroethene	79-01-6	MSD	21.60	0.72	20	104	77 - 124	RPD <u>5.37</u> (Max-18)	
Trichlorofluoromethane	75-69-4	MS	24.70	0	20	123	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	22.90	0	20	115	38 - 123	RPD <u>7.46</u> (Max-23)	
Vinyl Acetate	108-05-4	MS	17.40	0	20	87.2	58 - 136		
Vinyl Acetate	108-05-4	MSD	18.50	0	20	92.5	58 - 136	RPD <u>5.91</u> (Max-17)	
Vinyl Chloride	75-01-4	MS	21.20	0	20	106	27 - 138		
Vinyl Chloride	75-01-4	MSD	19.60	0	20	98	27 - 138	RPD <u>8.01</u> (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	30.30	30	101	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	31.30	30	104	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	30.10	30	100	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	30.80	30	103	79 - 114	
Dibromofluoromethane	1868-53-7	MS	30.90	30	103	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	31.90	30	106	78 - 116	
Toluene-d8	2037-26-5	MS	28	30	93.4	76 - 127	
Toluene-d8	2037-26-5	MSD	29.10	30	97	76 - 127	

Method Blank

3595069 (MB)

Created on 12/04/2022 22:58

For QC Batch 916914

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



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
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
Trichlorofluoromethane	75-69-4	BLK	1.0 U	ug/L	1.0	U



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No	Result	Units	RDL	Qualifiers
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	29.40	30	98.1	62 - 133
4-Bromofluorobenzene	460-00-4	BLK	30.50	30	102	79 - 114
Dibromofluoromethane	1868-53-7	BLK	30.50	30	102	78 - 116
Toluene-d8	2037-26-5	BLK	28.70	30	95.5	76 - 127

Lab Control Standard 3595070 (LCS) Created on 12/04/2022 22:58 For QC Batch 916914

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	22.60	20	113	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	22.70	20	114	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	18.40	20	92.1	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20.10	20	101	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	20.20	20	101	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.30	20	107	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	22	20	110	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	20.30	20	101	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	18.20	20	90.8	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	21.40	20	107	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	16.40	20	81.8	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	20.50	20	102	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	20.40	20	102	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20.40	20	102	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	19.70	20	98.7	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	21.20	20	106	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	19.60	20	98.2	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	21	20	105	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	25.60	20	128	64 - 129		
2-Butanone	78-93-3	LCS	92.20	100	92.2	50 - 152		
2-Hexanone	591-78-6	LCS	85.80	100	85.8	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	88.10	100	88.1	71 - 146		
Acetone	67-64-1	LCS	89.50	100	89.5	40 - 151		
Benzene	71-43-2	LCS	20.90	20	105	80 - 124		
Bromobenzene	108-86-1	LCS	21.50	20	108	81 - 119		
Bromochloromethane	74-97-5	LCS	22.30	20	112	73 - 117		
Bromodichloromethane	75-27-4	LCS	21.80	20	109	79 - 126		
Bromoform	75-25-2	LCS	20.80	20	104	70 - 123		
Bromomethane	74-83-9	LCS	24.30	20	122	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	23.10	20	116	62 - 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
Chlorobenzene	108-90-7	LCS	21.20		20	106	85 - 117		
Chlorodibromomethane	124-48-1	LCS	22.20		20	111	77 - 122		
Chloroethane	75-00-3	LCS	23.40		20	117	51 - 142		
Chloroform	67-66-3	LCS	21.70		20	108	78 - 122		
Chloromethane	74-87-3	LCS	21.40		20	107	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	20.80		20	104	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.60		20	103	81 - 121		
Dibromomethane	74-95-3	LCS	20.70		20	103	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	25.90		20	130	17 - 166		
Diisopropyl ether	108-20-3	LCS	19.50		20	97.4	74 - 131		
Ethylbenzene	100-41-4	LCS	21.50		20	107	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	24.80		20	124	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	20.80		20	104	69 - 115		
Methylene Chloride	75-09-2	LCS	20.10		20	101	76 - 121		
mp-Xylene	108383/106423	LCS	44.20		40	111	79 - 125		
Naphthalene	91-20-3	LCS	14.60		20	73.2	56 - 134		
o-Chlorotoluene	95-49-8	LCS	21		20	105	78 - 126		
o-Xylene	95-47-6	LCS	21.40		20	107	79 - 124		
p-Chlorotoluene	106-43-4	LCS	21.10		20	105	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	23.50		20	117	72 - 123		
Styrene	100-42-5	LCS	21.70		20	109	79 - 123		
Tetrachloroethene	127-18-4	LCS	21.40		20	107	72 - 124		
Toluene	108-88-3	LCS	21.10		20	106	80 - 125		
Total Xylenes	1330-20-7	LCS	65.60		60	109	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.70		20	104	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21.70		20	109	78 - 126		
Trichloroethene	79-01-6	LCS	21.50		20	107	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	24.60		20	123	38 - 123		
Vinyl Acetate	108-05-4	LCS	18.90		20	94.5	58 - 136		
Vinyl Chloride	75-01-4	LCS	23		20	115	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	28.40	30	94.6	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	30.70	30	102	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	30.60	30	102	78 - 116	
Toluene-d8	2037-26-5	LCS	28.60	30	95.4	76 - 127	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3275166001	MW-34D	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166002	MW-35D	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166003	MW-33D-235	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166004	MW-33D-295	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166005	MW-31D	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166006	MW-29D	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166007	MW-30D-273	SW846 3510C N/A	912308 N/A	11/25/2022 06:25 N/A	MXL	SW846 8270E SIM SW846 8260D	914158 915259
3275166008	MW-30D-413	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915259
3275166009	MW-32D	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915259
3275166010	MW-28D	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915795
3275166011	MW-36D	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915795
3275166012	MW-45	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915795
3275166013	MW-24D	SW846 3510C SW846 3510C N/A N/A	913853 913853 N/A N/A	11/28/2022 10:50 11/28/2022 10:50 N/A N/A	LDC LDC	SW846 8270E SIM SW846 8270E SIM SW846 8260D SW846 8260D	914227 915208 916914 915795
3275166014	MW-25D-130	SW846 3510C SW846 3510C N/A	913853 913853 N/A	11/28/2022 10:50 11/28/2022 10:50 N/A	LDC LDC	SW846 8270E SIM SW846 8270E SIM SW846 8260D	915208 914227 915795
3275166015	MW-25D-190	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915795
3275166016	Dup-112122	SW846 3510C N/A	913853 N/A	11/28/2022 10:50 N/A	LDC	SW846 8270E SIM SW846 8260D	914227 915795
3275166017	Trip Blank-C	N/A	N/A	N/A		SW846 8260D	915795
3275166018	Trip Blank-D	N/A	N/A	N/A		SW846 8260D	915795



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.**

Client Name: WSP
Address: 13530 Dulles Technology Dr
Suite 300
Herndon VA 20171

Contact: Eric Johnson
Phone#: (703) 709-6500
Project Name#: 31405608.011
Bill To:

Purchase Order #: TAT
 Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.
Date Required: _____ Approved? _____
Email? eric.johnson@wsp.com

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	**Matrix (See bottom of COC)	Enter Number of Containers Per Sample or Field Results Below.
1 MW-340	11/21/22	0840	G	GW	2
2 MW-350	11/21/22	0855	G	GW	2
3 MW-330-235	11/21/22	0935	G	GW	2
4 MW-330-295	11/21/22	0940	G	GW	2
5 MW-310	11/21/22	1005	G	GW	2
6 MW-29	11/21/22	1015	G	GW	2
7 MW-30-273	11/21/22	1030	G	GW	2
8 MW-300-413	11/21/22	1040	G	GW	2
9 MW-330	11/21/22	1150	G	GW	2
10 MW-28D	11/21/22	1130	G	GW	2

Client Name: WSP
Temp Taken By: MJE
Therm ID: TH510
WO Temp (°C): 32
Receipt Info completed by: _____
Cooler Custody Seals Intact: Y N NA
Deviations? NO YES
If YES, list below: _____

Temp Taken By: _____
WO Temp (°C): _____
Therm ID: 520
Receipt Info Completed By: DPB MJE
Cooler Custody Seal Intact: Y N NA
Sample Custody Seal Intact: Y N NA
Received on Ice: Y N NA
Cooler & Samples Intact: Y N NA
Correct Containers Provided: Y N NA
Sample Label/COC Agree: Y N NA
Adequate Sample Volumes: Y N NA
VDA Headspace Present: Y N NA
Voa Trip Blank: Y N NA
NLS 4 Days? Y N NA
Rad Screen (uCi): _____
New Source? Y N
New Source Contact: _____
Date/Tech: _____

SDWA Compliance: Y N
PWSID: _____
WV Containers 0.6°C: Y N NA
3#:

R=Raw P=Plant U=Unleak V=Special A=Annual Startup
on E-Entry Point

Sample/COC Remarks: No Collection
DPB
11/21/22

Contains Short Hold Testing: **YES** **NO**
Internal Use: If less than 48 hours - notify lab upon receipt

Deliverables		State Samples Collected In	
<input type="checkbox"/> Standard Lvl 1	<input type="checkbox"/> CLP-like	<input type="checkbox"/> HSCA	<input type="checkbox"/> NY
<input type="checkbox"/> Standard Lvl 2	<input type="checkbox"/> DOD	<input type="checkbox"/> Landfill	<input type="checkbox"/> NJ
<input type="checkbox"/> Standard Lvl 3	<input type="checkbox"/> NJ RED	<input type="checkbox"/> NJ GW	<input type="checkbox"/> PA
<input type="checkbox"/> Standard Lvl 4	<input type="checkbox"/> NJ Full	<input type="checkbox"/>	<input type="checkbox"/> WV
Excel Summary		Sample Disposal	
<input type="checkbox"/> Equis	<input type="checkbox"/> Lab	<input type="checkbox"/>	<input type="checkbox"/> FL
<input type="checkbox"/> Custom	<input type="checkbox"/> Special	<input type="checkbox"/>	<input type="checkbox"/> other

Received By / Company Name: ALS Evon P
Date: 11/21/22 Time: 1530
11/21/22 Time: 1740
Relinquished By / Company Name: Eric Johnson
Date: 11/21/22 Time: 1130
Comments: _____

*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=Wipes; WW=Wastewater
AT & CUMMINS APPROVES AND CONFIRMS THE USE OF THIS CHAIN OF CUSTODY FORM

3275166

Logged By: CXM
PH: SJB



COC #: _____
ALS Quote #: _____



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.**

Client Name: **WSP**
 Address: **13530 Dulles Technology Dr
 Suite 300
 Herndon VA 20171**

Contact: **Eric Johnson**
 Phone#: **(703) 709-6500**
 Project Name#: **31408608.011**
 Bill To:

Purchase Order #: **Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.**
 Date Required: **Approved?**
 Email? **eric.johnson@wsp.com**

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	Container Type	Container Size	Preservative	Matrix (See bottom of COC)	Enter Number of Containers Per Sample or Field Results Below.
1 MW-360	11/21/22	1145	6W	250	HCl Nox	VOCs	2
2 MW-450	11/21/22	1305	6W	250			2
3 MW-240	11/21/22	1315	6W	250			2
4 MW-250-130	11/21/22	1400	6W	250			2
5 MW-250-190	11/21/22	1345	6W	250			2
6 MW-250-190-MS	11/21/22	1345	6W	250			1
7 MW-250-190-MS0	11/21/22	1345	6W	250			1
8 DUP. 112122	11/21/22	1210	6W	250			1
9 Trip Blank-C	11/21/22	-	6	250			2
10 Trip Blank-D	11/21/22	-	6	250			2

Temp Taken By: **ATE**
 WO Temp (°C): **57.0**
 Therm ID: **DJP**
 Receipt Info Completed By: **DJP**
 Cooler Custody Seal Intact: **Y N N N**
 Sample Custody Seal Intact: **Y N N N**
 Received on Ice: **Y N N N**
 Cooler & Samples Intact: **Y N N N**
 Correct Containers Provided: **Y N N N**
 Sample Label/COC Agree: **Y N N N**
 Adequate Sample Volumes: **Y N N N**
 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Temp Taken By: **ATE**
 WO Temp (°C): **57.0**
 Therm ID: **DJP**
 Receipt Info Completed By: **DJP**
 Cooler Custody Seal Intact: **Y N N N**
 Sample Custody Seal Intact: **Y N N N**
 Received on Ice: **Y N N N**
 Cooler & Samples Intact: **Y N N N**
 Correct Containers Provided: **Y N N N**
 Sample Label/COC Agree: **Y N N N**
 Adequate Sample Volumes: **Y N N N**
 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Temp Taken By: **ATE**
 WO Temp (°C): **57.0**
 Therm ID: **DJP**
 Receipt Info Completed By: **DJP**
 Cooler Custody Seal Intact: **Y N N N**
 Sample Custody Seal Intact: **Y N N N**
 Received on Ice: **Y N N N**
 Cooler & Samples Intact: **Y N N N**
 Correct Containers Provided: **Y N N N**
 Sample Label/COC Agree: **Y N N N**
 Adequate Sample Volumes: **Y N N N**
 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

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 Sample Custody Seal Intact: **Y N N N**
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 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Temp Taken By: **ATE**
 WO Temp (°C): **57.0**
 Therm ID: **DJP**
 Receipt Info Completed By: **DJP**
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 Sample Custody Seal Intact: **Y N N N**
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 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Temp Taken By: **ATE**
 WO Temp (°C): **57.0**
 Therm ID: **DJP**
 Receipt Info Completed By: **DJP**
 Cooler Custody Seal Intact: **Y N N N**
 Sample Custody Seal Intact: **Y N N N**
 Received on Ice: **Y N N N**
 Cooler & Samples Intact: **Y N N N**
 Correct Containers Provided: **Y N N N**
 Sample Label/COC Agree: **Y N N N**
 Adequate Sample Volumes: **Y N N N**
 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Temp Taken By: **ATE**
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 Receipt Info Completed By: **DJP**
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 Sample Custody Seal Intact: **Y N N N**
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 Cooler & Samples Intact: **Y N N N**
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 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

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 Voa Trip Blank: **Y N N N**
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 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Temp Taken By: **ATE**
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 VOA Headspace Present: **Y N N N**
 Voa Trip Blank: **Y N N N**
 NIS 4 Days?: **Y N N N**
 Rad Screen (uCi): **Y N**
 Courier/Tracking #: **Y N**
 SDWA Compliance: **Y N**
 PWSID: **Y N**
 WW Containers 0-6°C: **Y N N A**

Circle Sample Collector: ALS Tech / Client ID: **2130**
 Received By / Company Name: **AS Eyon P**
 Date: **11/21/22 1530**
 Relinquished By / Company Name: **AS Eyon P**
 Date: **11-21-22 1746**
 Date: **11-21-22**
 Date: **11-21-22**
 Date: **11-21-22**
 Date: **11-21-22**

State Samples Collected In: **NY**
NJ
PA
WV
FL
 other

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

Sample/COC Remarks: **No Collector**
DJP
11/21/22

Contains Short Hold Testing: **YES NO**

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

Matrix: A=Air D=Drinking Water GW=Groundwater O=Oil LW=Liquid Waste S=Solid Soil/Sediment SW=Surface Water WP=Wipe WW=Wastewater