APRIL 2020 SURFACE WATER TECHNICAL MEMORANDUM FOR DARK HEAD COVE AND COW PEN CREEK
LOCKHEED MARTIN CORPORATION, MIDDLE RIVER COMPLEX
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ACRONYMS AND ABBREVIATIONS

AECOM	AECOM Technical Services, Inc.
BGE	Baltimore Gas and Electric
BTAG	(USEPA) Biological Technical Advisory Group
cis-1,2-DCE	cis-1,2-dichloroethene
COC	chain of custody
COMAR	Code of Maryland Regulations
DO	dissolved oxygen
g/d/feet	gallon(s) per day per foot
GIS	geographic information system
gpm	gallon(s) per minute
HASP	health and safety plan
MDE	Maryland Department of the Environment
MDL	Method Detection Limit
µg/L	microgram(s) per liter
MRC	Middle River Complex
ORP	oxygen reduction potential
PCB(s)	polychlorinated biphenyl(s)
TCE	trichloroethene
USEPA	United States Environmental Protection Agency
VOC(s)	volatile organic compound(s)

EXECUTIVE SUMMARY

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared this technical memorandum documenting the April 2020 surface water monitoring at the Lockheed Martin Middle River Complex in Middle River, Maryland. This technical memorandum is part of the long-term groundwater and surface water monitoring program at the Middle River Complex. The objectives of the surface water monitoring program are to determine whether volatile organic compounds, polychlorinated biphenyls, and/or 1,4-dioxane previously detected in groundwater and soil are reaching Dark Head Cove and Cow Pen Creek via groundwater seepage, infiltration, or transport through nearby storm drains at concentrations greater than the established site-specific risk-based swimming screening levels.

The risk-based swimming screening levels (developed to assess the cumulative risk to a theoretical recreational receptor compared with Maryland Department of the Environment risk management benchmarks) address six contaminants of concern found in surface water adjacent to the Middle River Complex: trichloroethene, *cis*-1,2-dichloroethene, 1,2,4-trichlorobenzene, chlorobenzene, polychlorinated biphenyls, and 1,4-dioxane. Investigative activities conducted from 2018 to 2020 as part of this surface water monitoring program include three annual rounds of sampling and chemical analyses of surface water in Dark Head Cove and Cow Pen Creek in April, June, and September of each year. Prior to 2018, annual surface water monitoring was completed by Tetra Tech, Inc. beginning in 2010.

This technical memorandum evaluates the April 2020 surface water sampling analytical data based on current and historical results and estimates of potential groundwater to surface water discharge. On-site personnel collected 23 surface water samples (including two duplicates) from 21 sampling locations in Cow Pen Creek and Dark Head Cove on April 28th, 2020, on behalf of Lockheed Martin Corporation. Surface water samples were sent to ALS Environmental in Middletown, Pennsylvania to be chemically analyzed for volatile organic compounds, polychlorinated biphenyls, and 1,4-dioxane.

The analytical results from the sampling events were evaluated with respect to ecological and human health screening-level criteria, including:

- Maryland ambient water quality criteria for human health consumption of organisms (Code of Maryland Regulations 26.08.02.03)
- United States Environmental Protection Agency National Recommended Water Quality Criteria – human health criteria, consumption of organism only (United States Environmental Protection Agency, 2015)
- United States Environmental Protection Agency National Recommended Aquatic Life Criteria – freshwater, acute and chronic criteria (United States Environmental Protection Agency, 2018a)
- United States Environmental Protection Agency Region III Biological Technical Advisory Group freshwater screening levels (United States Environmental Protection Agency, 2006)
    - If no benchmarks were listed by United States Environmental Protection Agency Region III, guidance from United States Environmental Protection Agency Region IV (United States Environmental Protection Agency, 2018b) and Region V (United States Environmental Protection Agency, 2003) were reviewed for additional ecological benchmarks.
- Risk-based site-specific swimming screening levels developed in 2019 for trichloroethene, *cis*-1,2-dichloroethene, 1,2,4-trichlorobenzene, chlorobenzene, polychlorinated biphenyls, and 1,4-dioxane for Dark Head Cove and Cow Pen Creek at the Middle River Complex. These risk-based screening values were approved by the Maryland Department of the Environment in 2019 (Lockheed Martin Corporation, 2019).

Findings from the April 2020 surface water sampling are as follows:

- trichloroethene—detected at seven locations in Dark Head Cove below screening levels
- 1,4-dioxane—detected at four locations in Dark Head Cove and three locations in Cow Pen Creek below screening levels
- polychlorinated biphenyls— non-detect at 18 locations sampled in Dark Head Cove

SECTION 1
INTRODUCTION

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared the following technical memorandum for the April 2020 surface water monitoring at the Middle River Complex in Middle River, Maryland (see Figure 1). This technical memorandum details the analytical results from 21 surface water samples and two duplicate samples collected from Dark Head Cove and Cow Pen Creek. Site contaminants at the Middle River Complex could potentially be introduced to surface water through groundwater discharge or through groundwater infiltration into storm drains, thereby discharging into surface water through nearby outfalls.

Before 2017, surface water had been sampled annually by Tetra Tech, Inc beginning in 2010. In 2017, the sampling frequency increased to three times per year (April, June, and September) to assess whether volatile organic compounds were reaching Dark Head Cove and Cow Pen Creek during implementation of the groundwater remedy at concentrations exceeding site-specific risk-based swimming screening levels. The objectives of additional sampling were to determine if polychlorinated biphenyls were in surface water after sediment removal actions and in-place treatment that Lockheed Martin performed in Dark Head Cove between 2015 and 2017, and to determine if the Block G 1,4 dioxane groundwater plume is discharging into Cow Pen Creek.

Surface water samples collected in Dark Head Cove in 2017 were not analyzed for 1,4-dioxane, as it was not a chemical of concern in groundwater in the southeastern portion of the Middle River Complex. Selected surface water samples collected under the current program from 2018 through 2020 were analyzed for 1,4-dioxane because it was detected in the 2017 groundwater samples in the eastern Blocks E and F plume, and site-specific swimming screening levels had since been revised lower. Similarly, polychlorinated biphenyls are not chemicals of concern in groundwater that discharges to Cow Pen Creek and therefore were not analyzed for in surface water samples.

This technical memorandum is organized as follows:

Section 1—Introduction: presents objectives for the surface-water monitoring program.

Section 2—Site Background: briefly describes the site history and surface water sampling history.

Section 3—Investigation Approach and Methodology: presents the technical approach to surface water sampling and describes the field methodology employed.

Section 4—Analytical Results: discusses the analytical results for each analyte.

Section 5—Summary: summarizes findings and conclusions.

Section 6—References: cites references used to compile this technical memorandum.

SECTION 2
SITE BACKGROUND

2.1 MIDDLE RIVER COMPLEX BACKGROUND

The Middle River Complex is part of the Chesapeake Industrial Park at 2323 Eastern Boulevard in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore. It is composed of approximately 161 acres, including 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a vacant concrete lot, a trailer and parts storage lot, and numerous grassy spaces along its perimeter. It is bounded by Eastern Boulevard (Route 150) to the north, Martin State Airport to the east, Dark Head Cove to the south, and Cow Pen Creek to the west. Figure 2 shows the Middle River Complex site layout.

LMC Properties, Inc., owns the Middle River Complex. Its primary activities at the Middle River Complex include facility and building management and maintenance. The main site tenant, MRA Systems, LLC, who's ownership transferred to Vision Technologies Aerospace Incorporated (U.S. subsidiary of Singapore Technologies Engineering Ltd.) in April 2019, designs, manufactures, fabricates, tests, overhauls, repairs, and maintains aeronautical structures, parts, and components for military and commercial applications. Lockheed Martin Rotary and Mission Systems (a division of Lockheed Martin Corporation) conducts engineering activities and fabricates, assembles, tests, and otherwise supports vertical-launch systems.

2.1.1 Middle River Complex History

In 1929, the Glenn L. Martin Company (a predecessor entity of Lockheed Martin Corporation) acquired large parcels of undeveloped land in Middle River, Maryland, on which to manufacture aircraft for the United States government and commercial clients. In the early 1960s, Glenn L. Martin Company merged with American-Marietta Company to form Martin Marietta Corporation. Around 1975, the adjacent eastern airport area (currently Martin State Airport), approximately 750 acres, was transferred to the state of Maryland. In the mid-1990s, Martin Marietta Corporation merged with Lockheed Corporation to form Lockheed Martin Corporation. Shortly after the

merger, General Electric Company entities acquired most of Lockheed Martin Corporation's aeronautical business in Middle River and the General Electric subsidiary, MRA Systems, Inc., began operations at the site. MRA Systems, Inc., was sold to Vision Technologies Aerospace Incorporated (United States subsidiary of Singapore Technologies Engineering Ltd.) in April 2019.

2.1.2 Middle River Complex Characteristics

2.1.2.1 Physiography

The Middle River Complex is in the Western Shore of the Coastal Plain physiographic province, which is generally characterized by low relief. The Middle River Complex's topography slopes gently, ranging from sea level to 32 feet above mean sea level (Cassell, 1977). The topography declines from Eastern Boulevard to the southwest and south toward Cow Pen Creek and Dark Head Cove.

2.1.2.2 Hydrology

The Middle River Complex is at the junction of Cow Pen Creek and Dark Head Cove. Both surface water bodies discharge into Dark Head Creek, a tributary of Middle River, which is a tributary of Chesapeake Bay. The Middle River Complex is approximately 3.24 miles (17,100 feet) upstream of Chesapeake Bay. The Middle River Complex has no surface water bodies on site.

Surface-water runoff discharges from the facility via storm drains, except for areas immediately adjacent to Cow Pen Creek and Dark Head Cove.

2.1.2.3 Regional Hydrogeology

Sand and gravel zones in the unconsolidated surficial deposits at the Middle River Complex, when present, might form an unconfined or water table aquifer system (Bennett and Meyer, 1952). The water table at the Middle River Complex generally conforms to the land surface, with the highest water levels in interior land areas and the lowest levels at approximately surface water elevations along the shoreline.

Regionally, the Patuxent Formation is the most important water-bearing formation in the Baltimore area. Industrial wells in the southeastern part of the area, specifically Curtis Bay and Sparrows Point, yield 500–900 gallons per minute (gpm). In these industrialized areas, the transmissivity

and storage coefficient in confined portions of the aquifer average about 50,000 gallons per day per foot (g/d/feet) and 0.00026, respectively.

The Patapsco Formation is also an important water-bearing formation in industrialized Baltimore, where it is separated by clay into a lower and an upper aquifer. Industrial wells screened in the lower aquifer yield as much as 500–750 gpm, with an estimated transmissivity of 25,000 g/d/feet (Bennett and Meyer, 1952). The upper aquifer yields quantities of water similar to industrial wells, but likely has a higher overall transmissivity, because it is thicker than the lower aquifer.

2.2 SURFACE WATER

Dark Head Cove and Cow Pen Creek receive groundwater discharge from the Middle River Complex either directly or through outfalls. Chemicals of concern found in Middle River Complex groundwater (e.g., polychlorinated biphenyls, trichloroethene, and 1,4-dioxane) have historically been detected in creek and/or cove samples. Sampling of surface water and sediment adjacent to the Middle River Complex's southern and western property boundaries began in March 2005 (Tetra Tech Inc., 2005).

Tetra Tech Inc. conducted subsequent sampling in 2005 and in each year from 2010–2017 to characterize surface water and sediment, conduct a human health and ecological risk assessment, aid in subsequent design of the sediment remedy, and to support storm-drain investigations (Tetra Tech Inc., 2017b). The current annual sampling program, which began in April 2018, seeks to determine the extent to which chemicals in groundwater and soil at the Middle River Complex have been transported to surface water, and if constituents in sediments might be affecting surface water. The sampling program (occurring in April, June, and September) is also designed to provide analytical data during times of greatest recreational use of these surface water bodies.

SECTION 3
INVESTIGATION APPROACH AND METHODOLOGY

The overall objective in characterizing site surface water is to provide updated surface water quality data. Surface water analytical data from Cow Pen Creek and Dark Head Cove are used to assess the nature and extent of contamination, including potential contaminant transport from the Middle River Complex (MRC) into surface water. Before beginning fieldwork, appropriate personnel from AECOM Technical Services, Inc. (AECOM) reviewed the site-specific health and safety plan (HASP) and the respective "Safe Work" permits and emergency response plan included in the HASP.

AECOM conducted mandatory health and safety tailgate meetings before each day's fieldwork and twilight debrief meetings at the end of each day. The AECOM site health and safety officer documented the topics covered and personnel in attendance. Safety requirements are addressed in detail in the site-specific AECOM HASP, included in the *2018–2020 Groundwater and Surface Water Monitoring Work Plan* and its associated addenda (AECOM, 2017, 2018a, 2018b, 2019, 2020).

3.1 SURFACE WATER SAMPLING

The April 2020 surface water sampling described herein provides additional and updated surface water quality data for Dark Head Cove and Cow Pen Creek. Specifically, current goals are to determine whether volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and/or 1,4-dioxane previously detected in groundwater and soil are reaching Dark Head Cove and Cow Pen Creek via groundwater seepage, infiltration, or transport through nearby storm drains at concentrations greater than the established site-specific risk-based swimming screening levels. Concentrations of VOCs, PCBs, and 1,4-dioxane in surface water were determined through laboratory analyses of the collected samples.

Samples in Dark Head Cove and Cow Pen Creek were collected with dedicated, disposable tubing, attached to a depth transducer that was part of the YSI water quality meter, which measures the water quality parameters outlined in Section 4.4. The meter was lowered to one foot below the water surface and marked by electrical tape on the cord at the one-foot mark. The appropriate length of tubing was cut (to ensure collection from one foot below the water surface) and samples were collected via a peristaltic pump set at a purge rate of approximately 500 milliliters per minute. Samples collected from Dark Head Cove are designated with an "S" in the sample ID, indicating shallow surface water sample collected from one foot below the water surface.

Dark Head Cove—Eighteen surface water samples were collected in Dark Head Cove at and near Outfalls 005E, 005W, 006, 007, 008, and 009, which discharge to the cove (Figure 3). Two samples were collected at Outfalls 006, 007, 008, and 009: one sample from 10 feet offshore ("A" sample) and a second sample from 50 feet offshore ("B" sample) at each of the above listed outfall locations. Two samples were collected west of Outfall 008: one sample from 10 feet offshore ("A" sample) and a second sample from 50 feet offshore ("B" sample) at a location that is not directly influenced by any of the above listed outfall locations. Five sampling locations west of Outfall 008 (MRC-SW12A-S, MRC-SW13A-S, MRC-SW15A-S, MRC-SW16A-S, and MRC-SW18A-S) have no associated "B" sample. These surface water samples were collected 10 feet offshore. Two outlets are at Outfalls 005: 005E and 005W. One sample was collected at each outlet, 10 feet offshore, recorded as the 5A1-S and 5A2-S samples. A single sample was collected 50 feet offshore, perpendicular to the bulkhead and halfway between the outlets, and was recorded as the "B" sample.

Cow Pen Creek—Two samples (MRC-SW1A and MRC-SW2A) were collected along the centerline of Cow Pen Creek downgradient of Outfall 004, with one sample collected upstream of the Block G swale outfall and one sample collected downstream of the Block G swale outfall. A third sample (MRC-SW17A) was collected near Outfall 003 and represents the farthest upgradient sample that can be collected within the site boundaries. MRC-SW17A was collected immediately downstream of the Baltimore Gas and Electric (BGE) property boundary. BGE owns this section of the creek and does not allow creek samples to be collected by Lockheed Martin on BGE property. Table 1 summarizes the analytical constituents included in the April 2020 monitoring program.

3.1.1 Chemical Analyses

Surface water samples were analyzed at ALS Environmental (in Middletown, Pennsylvania) for chemical analysis of VOCs, PCBs, and 1,4-dioxane. As shown in Table 1, all samples were analyzed for VOCs, Cow Pen Creek and select Dark Head Cove samples were analyzed for 1,4-dioxane, and Dark Head Cove surface water samples were analyzed for PCB homologs.

Two field duplicates, two matrix spikes, and two matrix spike duplicate samples for each parameter (VOCs, 1,4-dioxane, and PCB homologs) were collected during the April 2020 surface-water sampling. One trip-blank sample per sampling event (i.e., one per cooler) was also collected for VOC analysis.

Water quality parameters, including color, temperature, pH, specific conductance, hardness, salinity, turbidity, dissolved oxygen, and oxidation reduction potential, were measured at surface water sampling locations at the time of sampling.

3.1.2 Staff Gauges and Tidal Stages

Tidal stage at the time of sample collection was recorded from two staff gauges shown on Figure 3. The first staff gauge, MRC-STAFF01, is in Dark Head Cove near Outfall 009 and the second staff gauge, MRC-STAFF02, is near Cow Pen Creek. Tidal stages were recorded on April 28th, 2020, before and after sampling in each respective area. When sampling began in Dark Head Cove on April 28th, MRC-STAFF01 read 0.4 feet at approximately 0834 hours. By the completion of the Dark Head Cove sampling, the staff gauge read 0.9 feet at approximately 1512 hours. When sampling began in Cow Pen Creek on April 28th, MRC-STAFF02 read 0.6 feet at approximately 1520 hours. By the completion of the Cow Pen Creek sampling, the staff gauge again read 0.6 feet at approximately 1610 hours. Tidal information from the Bowley Bar Point station, southeast of Middle River, Maryland, reported low tide at 0500 hours on April 28th, 2020. Tidal information is documented on the surface water sampling forms, in Appendix A.

3.2 MOBILE DATA COLLECTION DOCUMENTATION

Site activities and observations, including an overall record of field activities, were recorded on electronic field log sheets. Completed chains-of-custody (COC) and matrix specific sampling log sheets were maintained. Completed COC forms are found in the *Data-Validation Report* in

Appendix B. AECOM used Esri's mobile applications *Collector for ArcGIS*® during surface water data collection. Electronic data collection is designed to be consistent with the forms in Appendix A.

Once in the field, if the technician required location services, needed to reference a base map, or needed to add or edit a location, *Collector for ArcGIS*® was used. The technician was also able to review historical information about the location, make edits, and take photos with the application, as required. Surface water sampling locations were also surveyed using a handheld global positioning system receiver in the Maryland State Plane North American Datum 1983.

Water quality parameters from each sample location were recorded on Excel spreadsheets using field-dedicated tablets. Blank templates used to record sampling information and water quality data were pre-loaded on each field tablet. Tablets were connected to a central Microsoft OneDrive account where updates were synched periodically to a cloud network. While in the field, AECOM personnel also used *Collector for ArcGIS*, a mobile data application by Esri, to aid personnel with location services, provide base-map references, and allow the user to edit sampling location information based on field observations.

3.3 EQUIPMENT DECONTAMINATION

The surface water samples were collected using a peristaltic pump and disposable tubing which was changed between each sample location. Therefore, equipment decontamination was unnecessary during the April 2020 surface water sampling event.

3.4 WASTE MANAGEMENT

No investigation-derived waste was generated during this surface water sampling. General waste, such as gloves and tubing were disposed of as general refuse.

3.5 DATA REVIEW

Laboratory data were entered into an internal sample database and evaluated against site-specific risk-based swimming-screening levels and applicable regulatory criteria. AECOM performed a manual data review and data validation using the *EQuIS*™ *Automated Validated Assistant* tool. This included completing a limited data review (evaluating data completeness, holding times, laboratory and field blank contamination, laboratory batch quality control, field duplicate

precision, and detection limits) concurrent with the data evaluation. The review is based on the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA-540-R-2017-002, January 2017a) and USEPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 540-R-2017-001, January 2017b) for an Organic/Inorganic Level I data review. Data were reviewed based on the specifics of the analytical method used. The data-qualifying flags applied to the surface water chemical results during data validation are identified in the *Data-Validation Report* in Appendix B. The analytical laboratory reports can be found in Appendix C. AECOM has uploaded new surface water sampling locations and validated data into the Lockheed Martin EESH-GIS database.

SECTION 4
ANALYTICAL RESULTS

Validated analytical data from the April 2020 surface water sampling were evaluated with respect to appropriate ecological and human health screening level criteria, including:

- Maryland ambient water quality criteria for human health consumption of organisms (Code of Maryland Regulations [COMAR] 26.08.02.03)
- United States Environmental Protection Agency (USEPA) National Recommended Water Quality Criteria – human health criteria, consumption of organism only (USEPA, 2015)
- USEPA National Recommended Aquatic Life Criteria – freshwater, acute and chronic criteria (USEPA, 2018a)
- USEPA Region III Biological Technical Advisory Group (BTAG) freshwater screening levels (USEPA, 2006)
- If no benchmarks were listed by USEPA Region III, guidance from USEPA Region IV (USEPA, 2018b) and Region V (USEPA, 2003) were reviewed for additional ecological benchmarks.
- Risk-based site-specific swimming screening levels developed in 2019 for trichloroethene (TCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), 1,2,4-trichlorobenzene, and 1,4-dioxane for Dark Head Cove and Cow Pen Creek at the Middle River Complex (MRC). These risk-based screening values were approved by the Maryland Department of the Environment (MDE) in 2019 (Lockheed Martin Corporation [Lockheed Martin], 2019).

Site contaminants in groundwater at the MRC could potentially be introduced to surface water through groundwater discharge, or through groundwater infiltration into storm drains thereby discharging to surface water through nearby outfalls. The objectives of additional sampling were to determine if polychlorinated biphenyls (PCBs) were in surface water after sediment removal actions and in place treatment that Lockheed Martin performed in Dark Head Cove between 2015 and 2017, and to determine if the Block G 1,4-dioxane groundwater plume is discharging into Cow Pen Creek.

The analytical data suggest that a method of transporting groundwater contaminants of concern to surface water exists, via either of the two pathways described above. Table 2 outlines the detected

analytes from each sampling location and compares that to the screening levels established by each of the above entities. The full list of analytical results, including non-detects, is provided in Appendix D. To improve readability throughout Section 4, the leading "MRC" prefix before each sample name has been dropped, i.e., MRC-SW17A will henceforth be referred to as SW17A.

4.1 VOLATILE ORGANIC COMPOUNDS

Table 2 summarizes volatile organic compound (VOC) detections in April 2020. The distribution of detections is shown in Figure 4. Six VOCs were detected in surface water: acetone, carbon disulfide, chloroform, tert-butyl alcohol, toluene, and TCE. Acetone was detected in 21 surface water sampling locations, ranging from 5.1 J to 44.4 micrograms per liter (µg/L). The BTAG ecological screening level of 1,500 µg/L is the only established criterion for acetone in surface water. Therefore, no acetone detections exceeded the screening levels. Acetone is considered a common laboratory contaminant. However, it was not detected in any field blanks or laboratory blanks associated with the April 2020 surface water samples.

TCE, the primary VOC of concern associated with groundwater at MRC, was detected in seven sampling locations in Dark Head Cove (SW6A-S, SW6B-S, SW8A-S, SW8B-S, SW12A-S, SW-15A-S, and SW16A-S) ranging from 0.55 J to 2.2 µg/L. The analyte *cis*-1,2-DCE and vinyl chloride, breakdown products of TCE, was not detected in surface water samples in Dark Head Cove.

As shown in Table 2, the detected VOC concentrations are well below their various respective screening criteria. The highest TCE concentration of 2.2 µg/L from the most recent surface water sampling of April 2020 was observed at SW8A-S. Surface water sample location SW8A-S is in the direct path of effluent from Outfall 008 within Dark Head Cove. The highest TCE concentration in 2018 was 1.6 µg/L at sampling location SW13A-S during the April event, and the highest TCE concentration of April 2019 was 4.2 µg/L at SW12A-S. The groundwater/surface water relationship is dynamic in nature, influenced by tidal-zone mixing and mechanisms of the groundwater/surface water discharge/recharge relationship, creating an uneven distribution of contaminants within Dark Head Cove and Cow Pen Creek, which is being further evaluated as part of the Blocks E and F mass discharge assessment.

USEPA and MDE have not established acute or chronic freshwater criteria for TCE; however, both entities have established a human health consumption-of-aquatic-organism criterion of 300 µg/L for TCE when adjusted for the MDE risk level of 1×10^{-05} (i.e., a one in 100,000 risk). The BTAG ecological screening level for TCE is 21 µg/L. The maximum TCE concentration (2.2 µg/L) detected in this investigation is more than nine times below the most conservative regulatory screening level of 21 µg/L, and more than thirteen times below the MDE-approved risk-based swimming screening level of 30 µg/L for evaluating exposure risks to swimmers (Table 2).

4.2 1,4-DIOXANE

As shown in Table 2, 1,4-dioxane was detected at seven of the sample locations it was analyzed for in concentrations ranging from 0.026 J to 0.056 J µg/L. During data validation of the laboratory results, the seven sample results were assigned a "J" as a final qualifier, indicating that this value is an estimated concentration greater than the method detection limit and less than the reporting limit. This concentration is negligible compared to the USEPA ecological screening level of 22,000 µg/L. This concentration is also below the MDE-approved risk-based swimming screening level of 20 µg/L. In April 2019, 1,4-dioxane was detected in the same seven sample locations in concentrations ranging from 0.024 J to 0.064 J µg/L. However, in April 2018 only one sample result, at location SW8B-S, detected 1,4-dioxane at a concentration of 0.049 J µg/L.

4.3 POLYCHLORINATED BIPHENYLS

During the April 2018 and 2019 surface water sampling events, 18 samples collected in Dark Head Cove had detections of PCBs, specifically only the total dichlorobiphenyl homolog group. In April 2018, concentrations of total dichlorobiphenyls ranged from 0.0019 J µg/L at SW13A-S to 0.0066 µg/L in sample SW7A-S. In April 2019, concentrations of total dichlorobiphenyls ranged from 0.003 J- µg/L at SW18A-S to 0.0082 J+ µg/L at SW13A-S. PCBs were non-detect in the 18 surface water samples collected in Dark Head Cove in April 2020. These results are depicted in Figure 5.

4.4 METHOD DETECTION LIMIT EVALUATION OF POLYCHLORINATED BIPHENYLS

The April 2020 non-detect results for the dichlorobiphenyl homolog group did not appear consistent with previously observed detections during the 2018 and 2019 sampling events. During

data validation, further assessment of the sensitivity and comparability of the April 2020 PCB homolog results revealed that the initially reported 2020 method detection limits (MDLs) had increased since April 2019 (Appendix B). Over the course of a more detailed review by the data validator and the laboratory technical director, it was determined that lower MDLs could be appropriately reported for dichlorobiphenyls using the results of the annual laboratory MDL verification study that was performed in December 2019 in accordance with USEPA Method 680 and the *USEPA Definition and Procedure for the Determination of the Method Detection Limit, Revision 2* (December 2016). Subsequently, the laboratory reprocessed the April 2020 instrument data to report the lower MDLs for dichlorobiphenyls and performed a manual chromatographic review to verify the results. The reprocessed dichlorobiphenyls results were verified as non-detect. The laboratory deliverable found in Appendix C reflects the results of the reprocessed PCB homolog data. This evaluation means that the 2020 MDLs (between 0.0025 and 0.0029 µg/L) are comparable to the MDLs obtained during 2019 (between 0.0023 and 0.0025 µg/L), and clarifies that comparable concentrations of dichlorobiphenyl homolog group PCBs detected in 2018 and 2019 were not present in Dark Head Cove surface water during 2020 (Figure 5). This variation over time may be explained by the understanding that surface water is dynamic in nature, influenced by tidal zone mixing, runoff, and mechanisms of the groundwater/surface water discharge/recharge relationship, all contributing to potentially uneven or fluctuating identification of PCBs over time within Dark Head Cove.

4.5 WATER QUALITY PARAMETERS

Water quality parameters were collected in the field for each of the 21 field samples and two duplicate samples collected during the April 2020 sampling. Water quality parameters, including temperature, pH, specific conductance, hardness, salinity, turbidity, dissolved oxygen (DO), and oxidation reduction potential (ORP), were measured at all surface water sampling locations at the time of sampling. Water quality parameter data are in Table 3. Associated parameters were measured at approximately one foot below the water surface, before sample collection.

Sampling locations have slightly basic pH values, ranging between 7.02 and 8.03 except for three samples (SW7A, SW7B, and SW9A) which exhibit pH values of 5.77, 6.34, and 6.71 respectively. These values are consistent with natural surface water in this region. Turbidity was consistent in

most samples, with the highest turbidity reported from SW9B-S within Dark Head Cove at 4.1 nephelometric turbidity units.

DO levels are on the higher side of typical values, ranging from 5.77 to 9.40 milligrams per liter, indicating a healthy estuarine environment. Additionally, all ORP values are positive, ranging from 72 to 295 millivolts, consistent with surface water containing high levels of dissolved oxygen.

SECTION 5
SUMMARY

AECOM Technical Services, Inc. (AECOM) collected 23 field samples from 21 locations throughout Cow Pen Creek and Dark Head Cove on April 28th, 2020, on behalf of Lockheed Martin Corporation (Lockheed Martin). The samples were collected, sent to a laboratory, and chemically analyzed for volatile organic compounds (VOCs), 1,4-dioxane, and polychlorinated biphenyls (PCBs). These analyses were carried out to determine if these constituents are in surface water.

Trichloroethene (TCE) was detected in seven samples (SW6A-S, SW6B-S, SW8A-S, SW8B-S, SW12A-S, SW15A-S, and SW16A-S) within Dark Head Cove and downgradient to the southeastern Blocks E/F trichloroethene plume, at concentrations ranging from 0.55 J to 2.2 micrograms per liter (µg/L). These TCE concentrations are below the United States Environmental Protection Agency (USEPA) screening level value of 21 micrograms per liter (µg/L), well below the human health consumption-of-organism's level of 300 µg/L per the *Code of Maryland Regulations* (COMAR), and well below the site-specific risk-based swimming screening level of 30 µg/L (Lockheed Martin, 2019). The TCE detections in surface water are likely due to groundwater to surface water discharge of the nearby trichloroethene-impacted groundwater plume originating in Block E.

1,4-Dioxane was detected in seven of the seven sample locations it was analyzed for in concentrations ranging from 0.026 J to 0.056 J µg/L. These concentrations are significantly less than the associated USEPA ecological screening level of 22,000 µg/L and below the site-specific screening criterion for swimming of 20 µg/L. The detections of 1,4-dioxane in Dark Head Cove are likely due to groundwater discharge into Dark Head Cove from the southeastern groundwater TCE plume emanating from Block E. The detections of 1,4-dioxane in Cow Pen Creek are possibly due to groundwater discharge into Cow Pen Creek from the southwestern groundwater 1,4-dioxane plume emanating from Block G.

In April 2018 and April 2019, total dichlorobiphenyls were detected in Dark Head Cove locations and exceeded the human health screening level of 0.00064 µg/L set in place by Code of Maryland Regulations for total polychlorinated biphenyls based on consumption of organisms. In April 2020, PCB concentrations were non-detect in the Dark Head Cove surface water samples.

SECTION 6
REFERENCES

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FIGURES

FIGURES

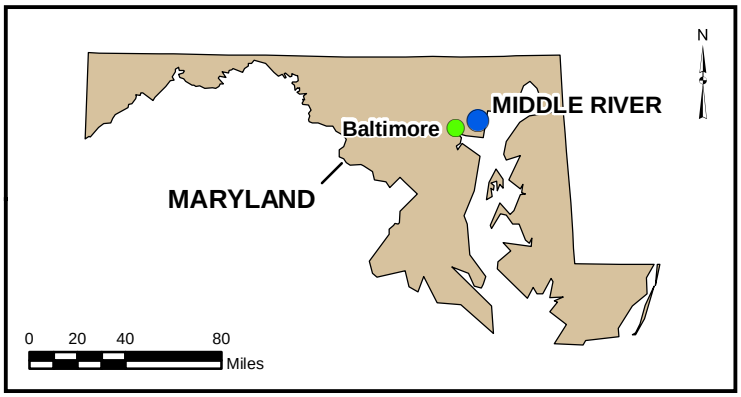

FIGURE 1

MIDDLE RIVER COMPLEX
LOCATION MAP

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	01/15/19	CREATED BY:	JEE

AECOM

Map Document: (Q:\Projects\ENV\GEARS\GEO\Lockheed Martin\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\2018 SW Memo\Figure_1_Location_Map.mxd)
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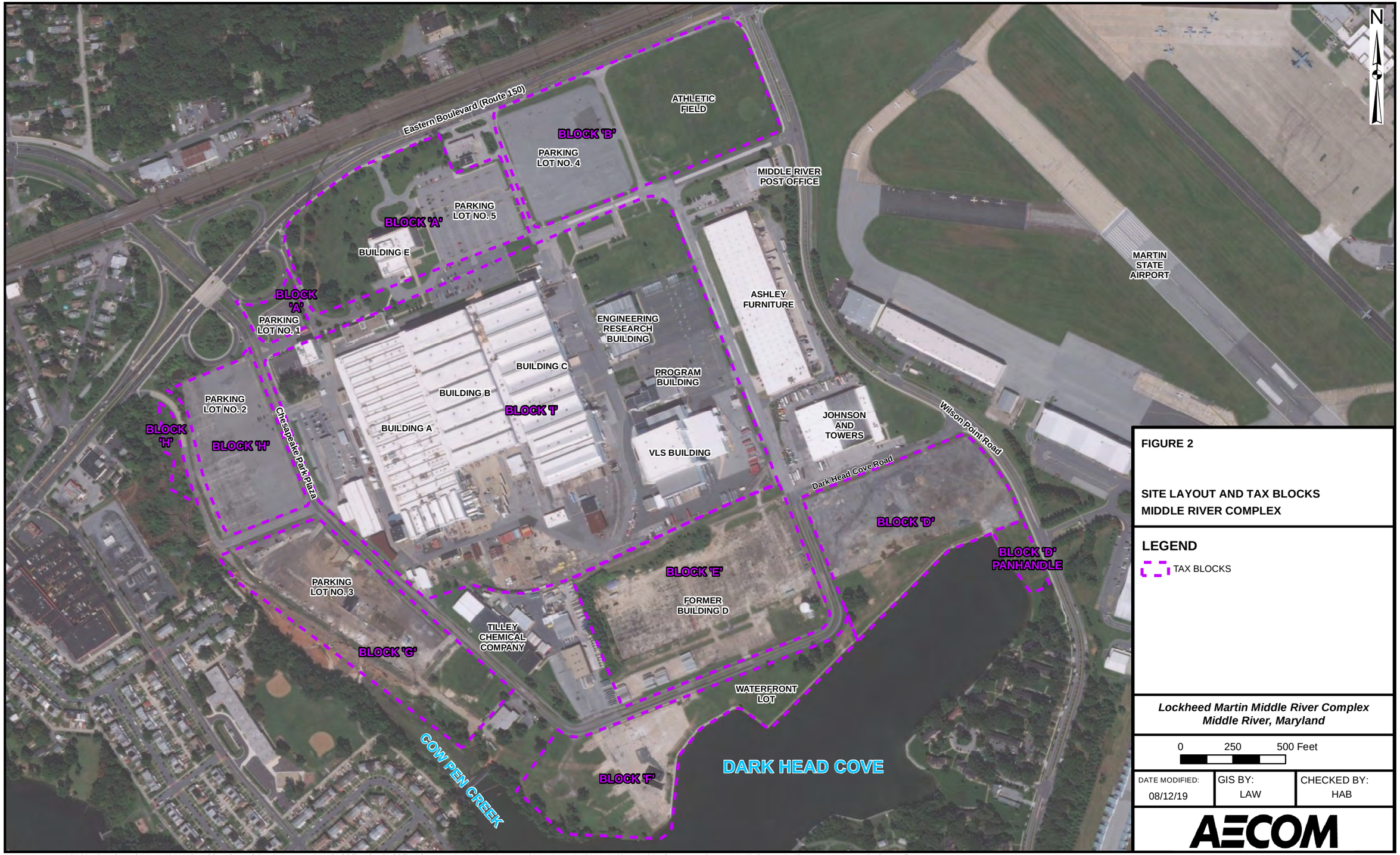

FIGURE 2

SITE LAYOUT AND TAX BLOCKS
MIDDLE RIVER COMPLEX

LEGEND

TAX BLOCKS

Lockheed Martin Middle River Complex
Middle River, Maryland

0 250 500 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
08/12/19	LAW	HAB

AECOM

Map Document: (Q:\Projects\ENV\GEARS\GEO\Lockheed Martin\MIS Support 2017\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\Surface Water\June 2018\Figure_2_Site_Layout_Tax_Blocks.mxd)
CREDITS: Aerial Imagery, ESRI, 2019; Basemap, Tetra Tech, 2017

FIGURE 3

2020 APRIL SURFACE WATER SAMPLING LOCATIONS
COW PEN CREEK AND DARK HEAD COVE

LEGEND

- SURFACE WATER SAMPLE LOCATION
- STORMWATER OUTFALL LOCATION
- STAFF GAUGE
- TAX BLOCKS

Lockheed Martin Middle River Complex
Middle River, Maryland

0 250 500 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
06/05/2020	HEO	HAB

AECOM

Map Document: (Q:\Projects\ENV\GEARS\GEO\Lockheed Martin\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\Surface Water\Work Plan 2020\Figure_SW_Sample_Locs_2020.mxd)
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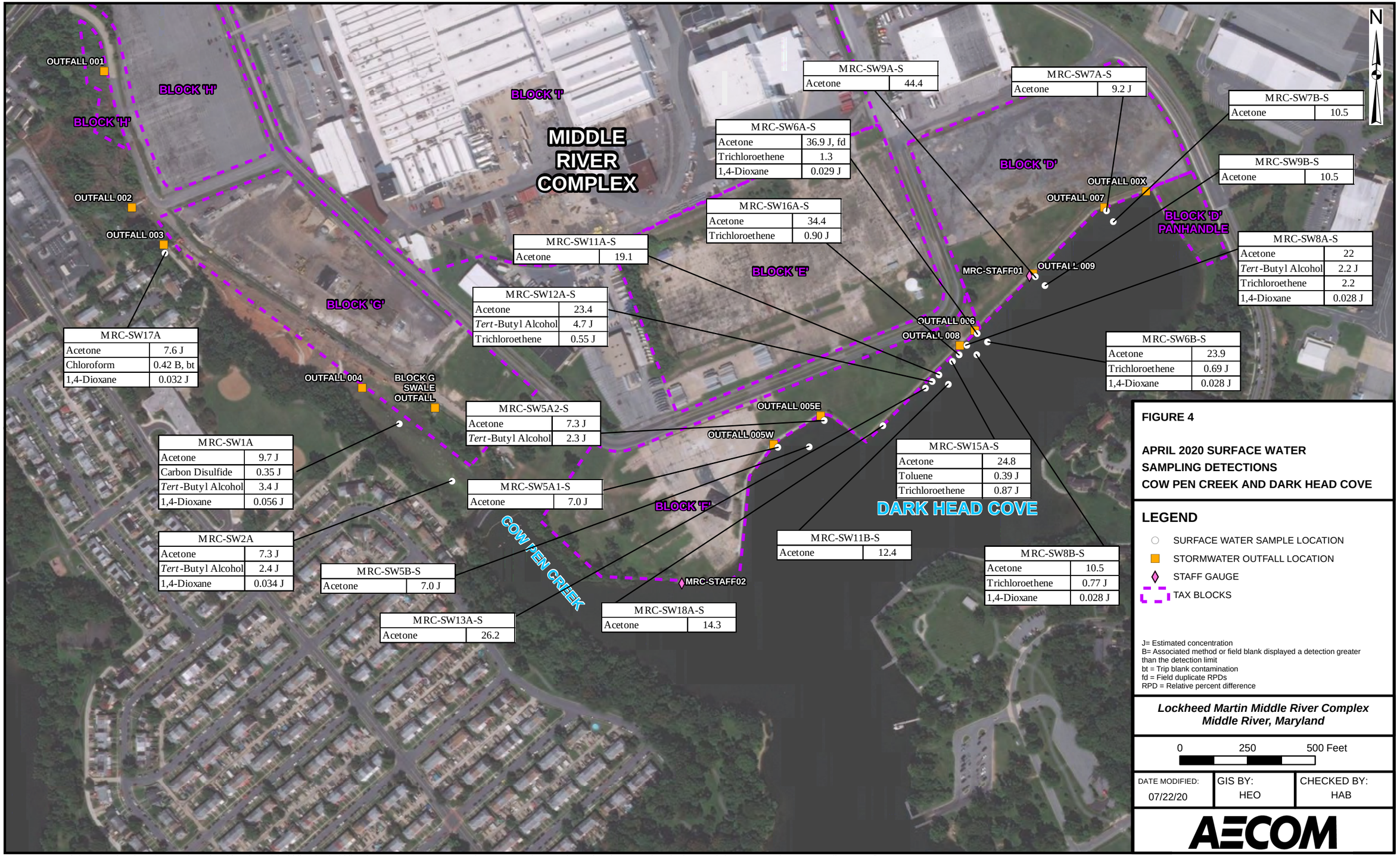

FIGURE 4

APRIL 2020 SURFACE WATER SAMPLING DETECTIONS
COW PEN CREEK AND DARK HEAD COVE

LEGEND

- SURFACE WATER SAMPLE LOCATION
- STORMWATER OUTFALL LOCATION
- STAFF GAUGE
- TAX BLOCKS

J= Estimated concentration
B= Associated method or field blank displayed a detection greater than the detection limit
bt = Trip blank contamination
fd = Field duplicate RPDs
RPD = Relative percent difference

Lockheed Martin Middle River Complex
Middle River, Maryland

0 250 500 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
07/22/20	HEO	HAB

AECOM

Map Document: (L:\DCS\Projects\ENV\GEARS\GEO\Lockheed Martin\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\Surface Water\Work Plan 2020\Figure4_Detections_SW_April2020.mxd)
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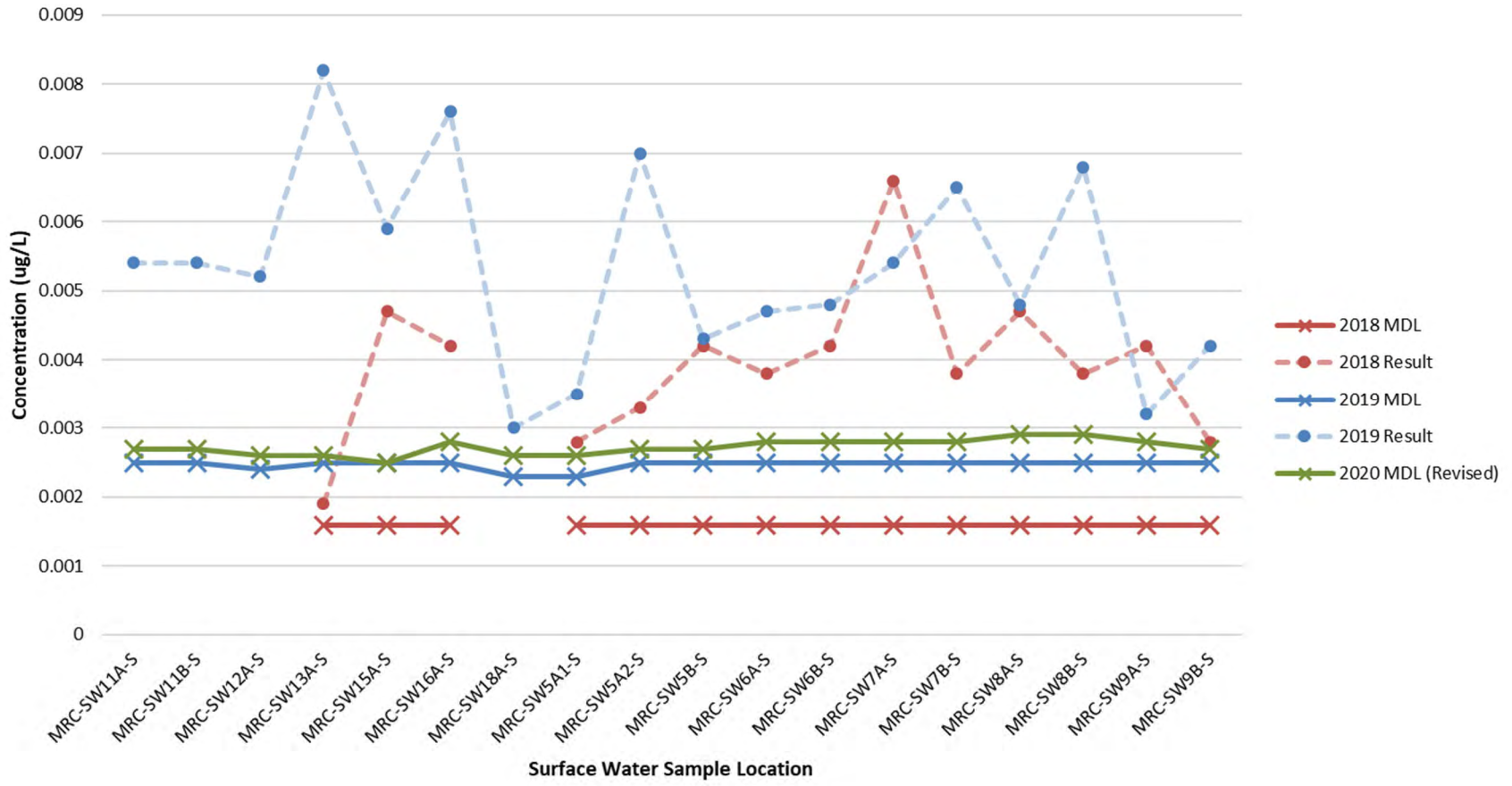

AECOM

Figure 5
Total Dichlorobiphenyls Method Detection Limits and Detected Concentrations
2018-2020 Surface Water Sampling
Lockheed Martin Middle River Complex

TABLES

TABLES

Table 1
2020 Surface Water Sampling Locations, Chemical Analyses, and Laboratory Analytical Methods
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 1 of 1

Sample Location	Sample Identification	Distance From Shore (in feet)	Samples Per Round[4]	Volatile Organic Compounds (USEPA Method 8260C)	1,4-Dioxane (USEPA Method SW846 8270D SIM)[3]	PCB Homologs (USEPA Method 680)[3]
Dark Head Cove						
Outfall 5[1]	MRC-SW5A1-S	10	1	x		x
	MRC-SW5A2-S	10	1	x		x
	MRC-SW5B-S*	50	1	x		x
Outfall 6	MRC-SW6A-S	10	1	x	x	x
	MRC-SW6B-S	50	1	x	x	x
Outfall 7	MRC-SW7A-S	10	1	x		x
	MRC-SW7B-S	50	1	x		x
Outfall 8	MRC-SW8A-S	10	1	x	x	x
	MRC-SW8B-S	50	1	x	x	x
Outfall 9	MRC-SW9A-S	10	1	x		x
	MRC-SW9B-S	50	1	x		x
Dark Head Cove	MRC-SW11A-S	10	1	x		x
	MRC-SW11B-S	50	1	x		x
	MRC-SW12A-S	10	1	x		x
	MRC-SW13A-S	10	1	x		x
	MRC-SW15A-S	10	1	x		x
	MRC-SW16A-S	50	1	x		x
	MRC-SW18A-S	10	1	x		x
	MRC-SW19A-S**	10	1	x		
Cow Pen Creek						
Outfall 3	MRC-SW17A	downstream[2]	1	x	x	
Near western plume	MRC-SW1A	upstream[2]	1	x	x	
	MRC-SW2A	downstream[2]	1	x	x	

* MRC-SW5B-S collected in April only

** MRC-SW19A-S collected in June and September only

1 Two near-shore samples (10-feet) will be collected only at Outfall 5; at the remaining outfalls, one near-shore (10-feet) sample will be collected

2 Samples will be collected from the creek's centerline, 10 feet upstream (northwest) and 10 feet downstream (southeast) from the estimated GW plume boundaries

3 1,4-Dioxane and PCB samples will be collected only in the April round

4 Samples are to be collected in April, June, and September, 1 foot below the water surface

5 Field parameters will be collected at all sampling locations and include pH, temperature, specific conductance, dissolved oxygen (DO), hardness, turbidity, oxidation-reduction potential (ORP), and salinity using calibrated portable field instruments (Horiba U-52) at the time of sampling.

6 Field blank: one sample, PCB homologs only

7 Equipment rinseate blank: one sample, PCB homologs only

8 PCB trip blank/laboratory-blind bottle blank: one sample, homologs only

8 Field Duplicate Frequency - 20% frequency, all analyses

9 Trip blank - one per shipment to the laboratory, VOCs only

Location and/or analysis added to the 2020 sampling program

MRC - Middle River Complex

PCB - polychlorinated biphenyl

USEPA - United States Environmental Protection Agency

VOCs - volatile organic compounds

Table 2
Detected Analytes and Screening Level Exceedances in April 2020 Surface Water Samples
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 1 of 4

		National Recommended Water Quality		Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW5A1-S 04/28/2020 Field Sample			MRC-SW5A2-S 04/28/2020 Field Sample			MRC-SW5B-S 04/28/2020 Field Sample			MRC-SW6A-S 04/28/2020 Field Sample			MRC-SW6A-S 04/28/2020 Field Duplicate			MRC-SW6B-S 04/28/2020 Field Sample		
Analyte	CAS Number	Acute	Chronic				Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC
VOLATILES (µg/L)																								
Acetone	67-64-1	NE	NE	1500	NE	NE	**7.0**	**J**		**7.3**	**J**		**7.0**	**J**		**36.9**	**J**	**fd**	**5.1**	**J**	**fd**	**23.9**		
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
Chloroform	67-66-3	NE	NE	1.8	4700	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
tert-Butyl Alcohol	75-65-0	NE	NE	NE	NE	NE	ND	U		**2.3**	**J**		ND	U		ND	U		ND	U		ND	U	
Toluene	108-88-3	NE	NE	2	15000	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
Trichloroethene	79-01-6	NE	NE	21	300	30	ND	U		ND	U		ND	U		**1.3**			ND	U		**0.69**	**J**	
SEMIVOLATILES (µg/L)																								
1,4-Dioxane	123-91-1	NE	NE	22000	NE	20	NS			NS			NS			**0.026**	**J**		**0.029**	**J**		**0.028**	**J**	

Bold values indicate detections

References

1 National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

2 United States Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks. Value for 1,4-dioxane is the USEPA Region 5 ecological screening value (USEPA, 2003).

3 For carcinogens, criterion is for incremental cancer risk of 1×10^{-5}

4 Risk-based swimming screening levels were developed for trichloroethene, *cis* -1,2-dichloroethene, 1,4 dioxane, 1,2,4-trichlorobenzene and Total PCBs for Dark Head Cove.

Definitions

FQ - Final Qualifier
MRC - Middle River Complex
ND - not detected
NE - not established
NS - not sampled
RC - Reason Code
SW - surface water
µg/L - micrograms per liter

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Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 2 of 4

		National Recommended Water Quality		Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW7A-S 04/28/2020 Field Sample			MRC-SW7B-S 04/28/2020 Field Sample			MRC-SW8A-S 04/28/2020 Field Sample			MRC-SW8B-S 04/28/2020 Field Sample			MRC-SW9A-S 04/28/2020 Field Sample			MRC-SW9B-S 04/28/2020 Field Sample		
Analyte	CAS Number	Acute	Chronic				Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC
VOLATILES (µg/L)																								
Acetone	67-64-1	NE	NE	1500	NE	NE	**9.2**	**J**		**10.5**			**22.0**			**10.5**			**44.4**			**10.5**		
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
Chloroform	67-66-3	NE	NE	1.8	4700	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
tert-Butyl Alcohol	75-65-0	NE	NE	NE	NE	NE	ND	U		ND	U		**2.2**	**J**		ND	U		ND	U		ND	U	
Toluene	108-88-3	NE	NE	2	15000	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
Trichloroethene	79-01-6	NE	NE	21	300	30	ND	U		ND	U		**2.2**			**0.77**	**J**		ND	U		ND	U	
SEMIVOLATILES (µg/L)																								
1,4-Dioxane	123-91-1	NE	NE	22000	NE	20	NS			NS			**0.028**	**J**		**0.028**	**J**		NS			NS		

Bold values indicate detections

References

1 National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

2 United States Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks. Value for 1,4-dioxane is the USEPA Region 5 ecological screening value (USEPA, 2003).

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Table 2
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Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 3 of 4

Analyte	CAS Number	National Recommended Water Quality		Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW11A-S 04/28/2020 Field Sample			MRC-SW11B-S 04/28/2020 Field Sample			MRC-SW12A-S 04/28/2020 Field Sample			MRC-SW13A-S 04/28/2020 Field Sample			MRC-SW15A-S 04/28/2020 Field Sample			MRC-SW16A-S 04/28/2020 Field Sample		
		Acute	Chronic				Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC
VOLATILES (µg/L)																							
Acetone	67-64-1	NE	NE	1500	NE	NE	**19.1**			**12.4**			**23.4**			**26.2**			**24.8**			**34.4**		
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
Chloroform	67-66-3	NE	NE	1.8	4700	NE	ND	U		ND	U		ND	U		ND	U		ND	U		ND	U	
tert-Butyl Alcohol	75-65-0	NE	NE	NE	NE	NE	ND	U		ND	U		**4.7**	**J**		ND	U		ND	U		ND	U	
Toluene	108-88-3	NE	NE	2	15000	NE	ND	U		ND	U		ND	U		ND	U		**0.39**	**J**		ND	U	
Trichloroethene	79-01-6	NE	NE	21	300	30	ND	U		ND	U		**0.55**	**J**		ND	U		**0.87**	**J**		**0.90**	**J**	
SEMIVOLATILES (µg/L)																							
1,4-Dioxane	123-91-1	NE	NE	22000	NE	20	NS			NS			NS			NS			NS			NS		

Bold values indicate detections

References

1 National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

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Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 4 of 4

Analyte	CAS Number	National Recommended Water Quality		Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW17A 04/28/2020 Field Sample			MRC-SW18A-S 04/28/2020 Field Sample			MRC-SW1A 04/28/2020 Field Sample			MRC-SW1A 04/28/2020 Field Duplicate			MRC-SW2A 04/28/2020 Field Sample		
		Acute	Chronic				Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC	Result	FQ	RC
VOLATILES (µg/L)																					
Acetone	67-64-1	NE	NE	1500	NE	NE	**7.6**	**J**		**14.3**			**8.2**	**J**		**9.7**	**J**		**7.3**	**J**	
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND	U		ND	U		**0.35**	**J**		ND	U		ND	U	
Chloroform	67-66-3	NE	NE	1.8	4700	NE	**0.42**	**B**	**bt**	ND	U		ND	U		ND	U		ND	U	
tert-Butyl Alcohol	75-65-0	NE	NE	NE	NE	NE	ND	U		ND	U		**3.4**	**J**		**3.1**	**J**		**2.4**	**J**	
Toluene	108-88-3	NE	NE	2	15000	NE	ND	U		ND	U		ND	U		ND	U		ND	U	
Trichloroethene	79-01-6	NE	NE	21	300	30	ND	U		ND	U		ND	U		ND	U		ND	U	
SEMIVOLATILES (µg/L)																					
1,4-Dioxane	123-91-1	NE	NE	22000	NE	20	**0.032**	**J**		NS			**0.049**	**J**		**0.056**	**J**		**0.034**	**J**	

Bold values indicate detections

References

1 National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

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fd = Field duplicate imprecision

Table 3
Field Measurements for Surface Water Quality, April 2020
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Location	Date	Time	Temp (°C)	pH (s.u.)	Specific Conductance (µS/cm)	Turb (NTU)	DO (mg/L)	ORP (mV)	Salinity (ppt)	Hardness (mg/L CaCO3)
MRC-SW1A	4/28/2020	1540	14.02	7.89	4.90	3.5	6.16	206	2.60	201.8
MRC-SW2A	4/28/2020	1530	13.80	7.94	5.03	3.5	5.86	215	2.70	201.8
MRC-SW5A1-S	4/28/2020	1440	13.99	8.03	5.21	2.9	7.42	184	2.80	201.8
MRC-SW5A2-S	4/28/2020	1415	14.31	8.00	5.20	2.7	7.04	186	2.80	201.8
MRC-SW5B-S	4/28/2020	1425	13.91	8.02	5.19	3.5	6.82	183	2.80	201.8
MRC-SW6A-S	4/28/2020	0930	12.74	7.20	5.30	1.8	6.42	186	2.80	201.8
MRC-SW6B-S	4/28/2020	1000	13.41	7.33	5.22	0.9	6.06	176	2.80	201.8
MRC-SW7A-S	4/28/2020	0840	11.42	5.77	3.88	3.6	6.41	295	2.10	201.8
MRC-SW7B-S	4/28/2020	0850	12.50	6.34	5.23	3.4	8.17	209	2.80	201.8
MRC-SW8A-S	4/28/2020	1145	13.37	7.61	5.28	0.0	8.00	200	2.80	201.8
MRC-SW8B-S	4/28/2020	1220	13.43	7.75	5.28	2.1	6.30	185	2.80	201.8
MRC-SW9A-S	4/28/2020	0905	12.50	6.71	5.29	3.3	8.40	188	2.80	201.8
MRC-SW9B-S	4/28/2020	0915	12.73	7.02	5.29	4.1	5.77	186	2.80	201.8
MRC-SW11A-S	4/28/2020	1305	13.81	7.83	5.24	3.0	7.04	184	2.80	201.8
MRC-SW11B-S	4/28/2020	1315	13.74	7.86	5.21	2.8	6.66	185	2.80	201.8
MRC-SW12A-S	4/28/2020	1330	13.99	7.92	5.18	2.3	7.79	187	2.80	201.8
MRC-SW13A-S	4/28/2020	1340	13.96	7.96	5.22	2.0	6.84	186	2.80	201.8
MRC-SW15A-S	4/28/2020	1025	13.37	7.58	5.28	0.6	6.36	180	2.80	201.8
MRC-SW16A-S	4/28/2020	1015	13.50	7.46	5.20	0.6	6.00	178	2.80	201.8
MRC-SW17A	4/28/2020	1730	11.73	7.89	0.41	2.6	9.40	72	0.20	189.6
MRC-SW18A-S	4/28/2020	1400	14.15	7.93	5.20	1.4	7.12	190	2.80	201.8

Notes:
Temp - Temperature
(°C) - Degrees Celcius
s.u. - Standard units
µs/cm - MicroSiemens per centimeter
Turb - Turbidity
NTU - Nephelometric turbidity unit
DO - Dissolved oxygen
mg/L - milligrams per liter
ORP - Oxidation reduction potential
mV - millivolts
ppt - parts per thousand

APPENDICES

APPENDICES

Appendix A Surface Water Sampling Forms

Appendix B Data Validation Report

Appendix C Laboratory Analytical Report

Appendix D Laboratory Analytical Result Table

APPENDIX A
Surface Water Sampling Forms

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW1A-20200428
Project No.: 60555202 Sample Location: MRC-SW1A
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

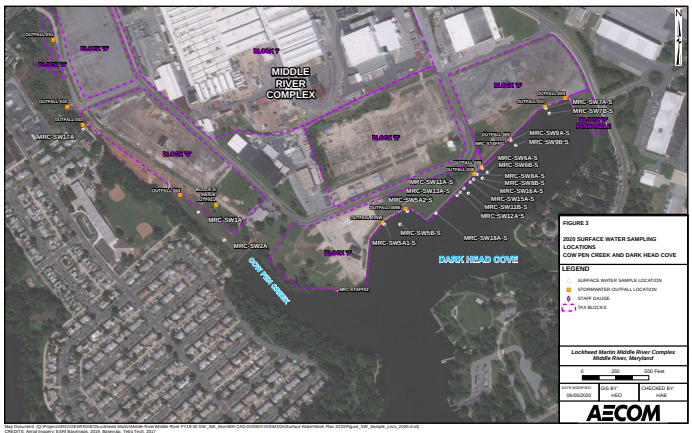
Date: 4/28/2020 Time:1540	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF02 1520: 0.6 feet 1610: 0.6 feet	**Clear**	**7.89**	**4.9**	**14.02**	**4**	**6.16**	**2.6**	**206**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4-dioxane (8270D/SIM)	None	2 - 1 L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	**Duplicate ID: MRC-SW1A-DUP-20200428 @ 1545**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW2A-20200428
Project No.: 60555202 Sample Location: MRC-SW2A
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

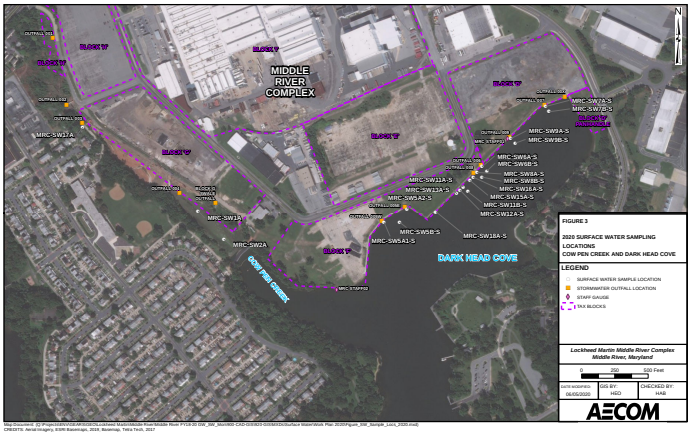
Date: 4/28/2020 Time:1530	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF02 1520: 0.6 feet 1610: 0.6 feet	**Clear**	**7.94**	**5.03**	**13.8**	**4**	**5.86**	**2.7**	**215**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4-dioxane (8270D/SIM)	None	2 - 1 L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW5A1-S-20200428
Sample Location: MRC-SW5A1-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

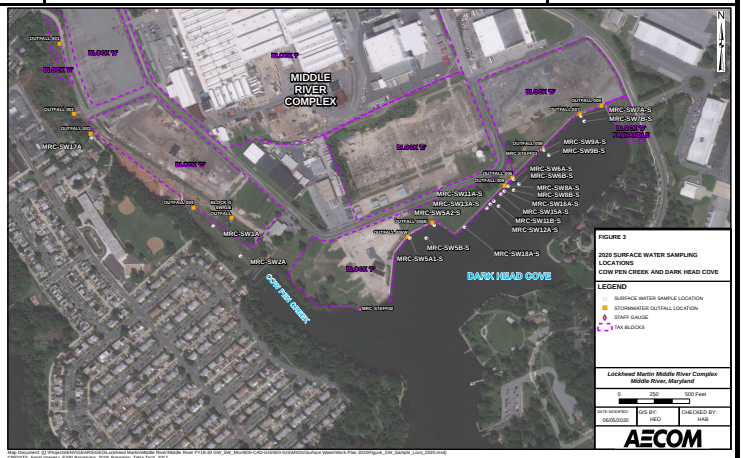
Date: 4/28/2020 Time:1440	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**8.03**	**5.21**	**13.99**	**3**	**7.42**	**2.8**	**184**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW5A2-S-20200428 Project No.: 60555202 Sample Location: MRC-SW5A2-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

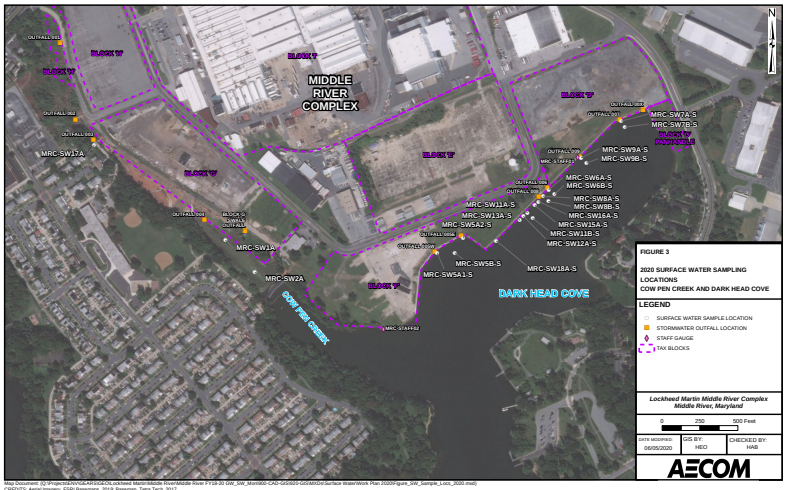
Date: 4/28/2020 Time:1415	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**8**	**5.2**	**14.31**	**3**	**7.04**	**2.8**	**186**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW5B-S-20200428
Sample Location: MRC-SW5B-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

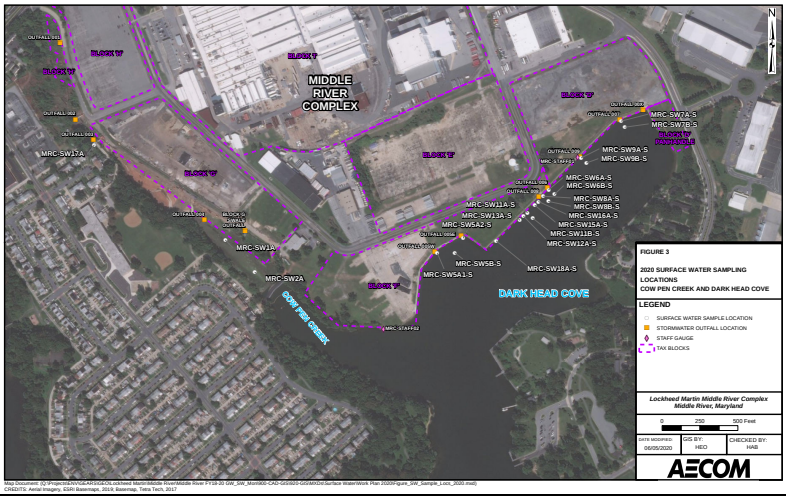
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:1425	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**8.02**	**5.19**	**13.91**	**4**	**6.82**	**2.8**	**183**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW6A-S-20200428
Sample Location: MRC-SW6A-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

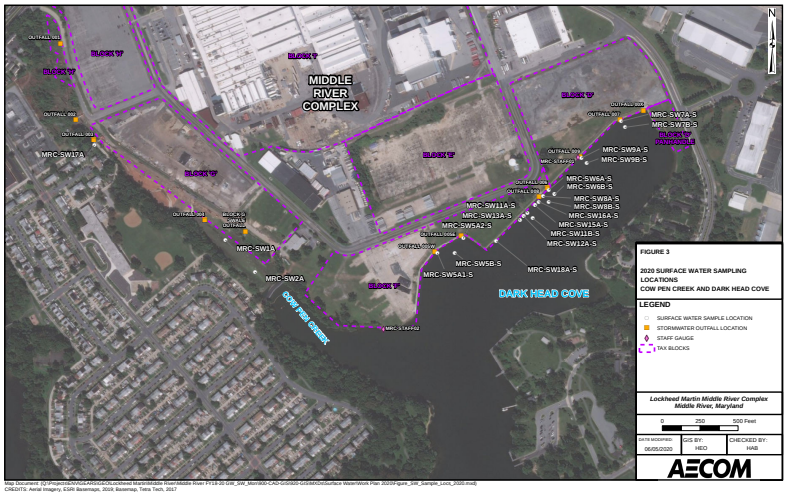
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:0930	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.2**	**5.3**	**12.74**	**2**	**6.42**	**2.8**	**186**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (8270D/SIM)	None	2 - 1000 mL ambers	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID: MRC-SW6A-S-DUP-20200428 @ 0935**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW6B-S-20200428

Project No.: 60555202 Sample Location: MRC-SW6B-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data

[] Monitoring Well Data

[X] Other: Tidal Creek - Freshwater

[] QA Sample Type: _____

Type of Sample:

[X] Low Concentration

[] High Concentration

SAMPLING DATA:

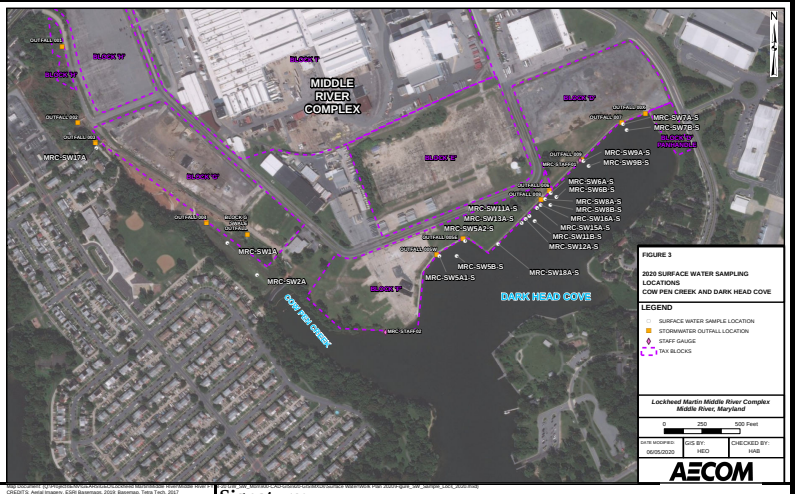
	Color (Visual)	pH (S.U.)	S.C. (µS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (ppt)	ORP (mV)
Date: 4/28/2020 Time:1000 Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.33**	**5.22**	**13.41**	**1**	**6.06**	**2.8**	**176**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (8270D/SIM)	None	2 - 1000 mL ambers	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID:

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW7A-S-20200428
Sample Location: MRC-SW7A-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

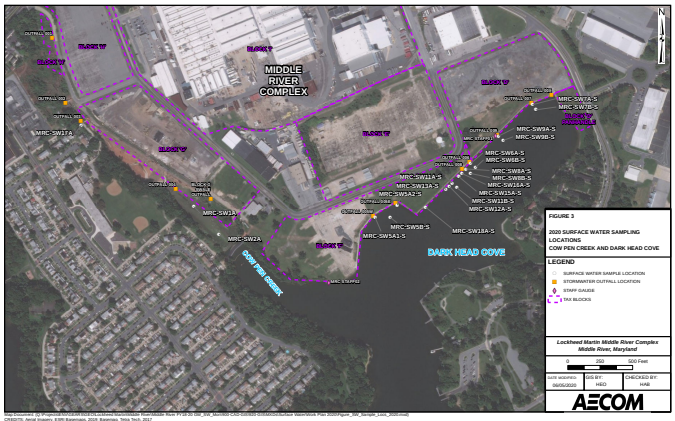
Date: 4/28/2020 Time:0840	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**5.77**	**3.88**	**11.42**	**4**	**6.41**	**2.1**	**295**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW7B-S-20200428
Sample Location: MRC-SW7B-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type:

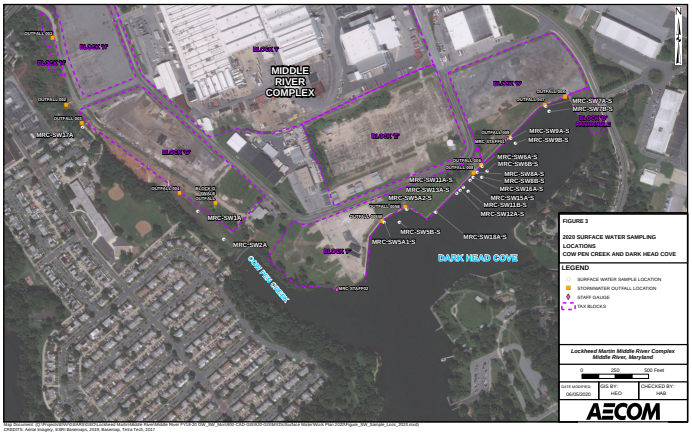
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:0850	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**6.34**	**5.23**	**12.5**	**3**	**8.17**	**2.8**	**209**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW8A-S-20200428

Project No.: 60555202 Sample Location: MRC-SW8A-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data

[] Monitoring Well Data

[X] Other: Tidal Creek - Freshwater

[] QA Sample Type: _____

Type of Sample:

[X] Low Concentration

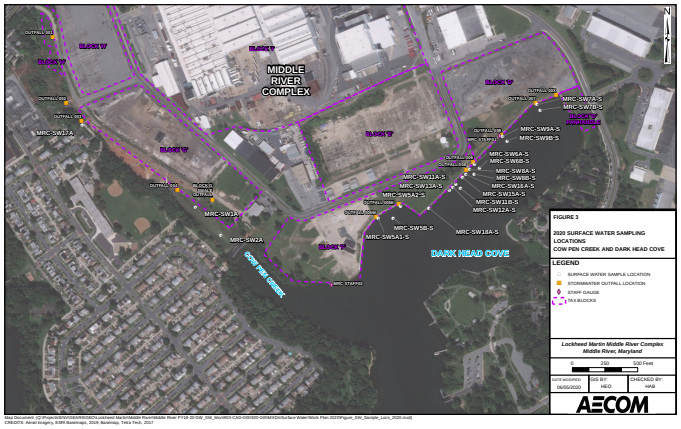
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:1145	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.61**	**5.28**	**13.37**	**0**	**8**	**2.8**	**200**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	8 - 40 mL glass vials	Yes
1,4 Dioxane (8270D/SIM)	None	8 - 1000 mL ambers	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW8B-S-20200428
Sample Location: MRC-SW8B-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type:

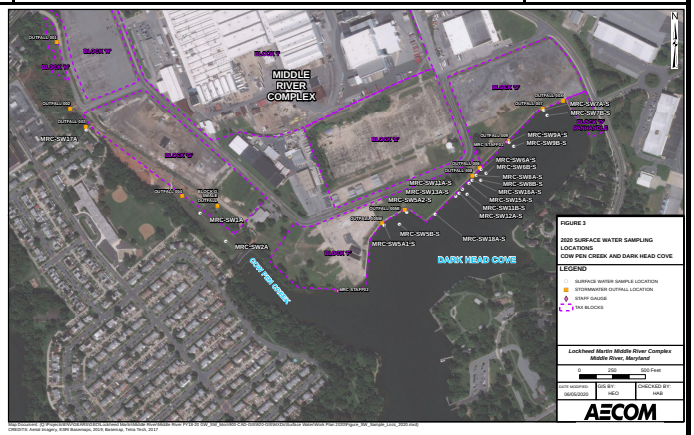
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:1220	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.75**	**5.28**	**13.43**	**2.1**	**6.3**	**2.8**	**185**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (8270D/SIM)	None	2 - 1000 mL ambers	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW9A-S-20200428
Sample Location: MRC-SW9A-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

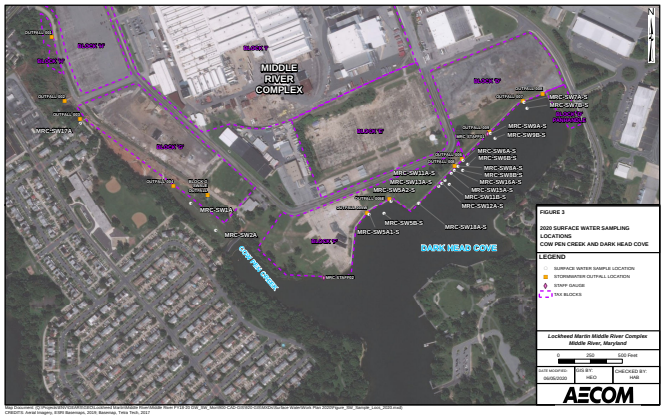
Date: 4/28/2020 Time:0905	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**6.71**	**5.29**	**12.5**	**3**	**8.4**	**2.8**	**188**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW9B-S-20200428
Sample Location: MRC-SW9B-S
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type:

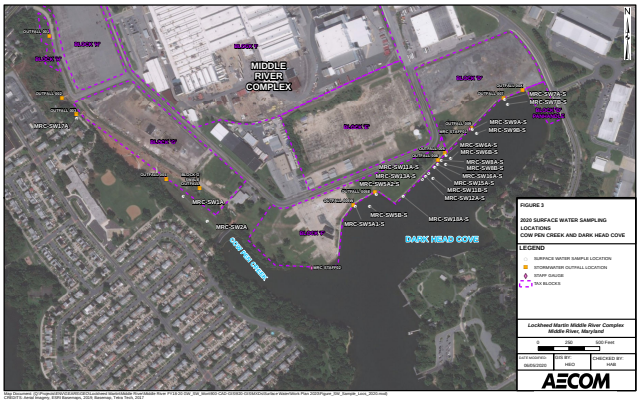
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:0915	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.02**	**5.29**	**12.73**	**4**	**5.77**	**2.8**	**186**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW11A-S-20200428
Sample Location: MRC-SW11A
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

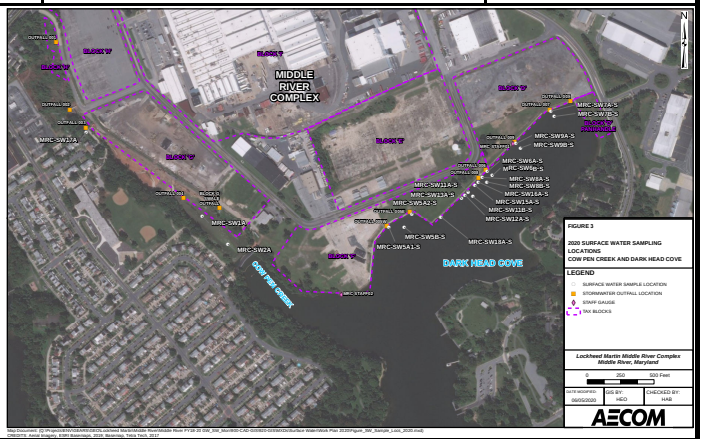
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:1305	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.83**	**5.24**	**13.81**	**3**	**7.04**	**2.8**	**184**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW11B-S-20200428
Sample Location: MRC-SW11B
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

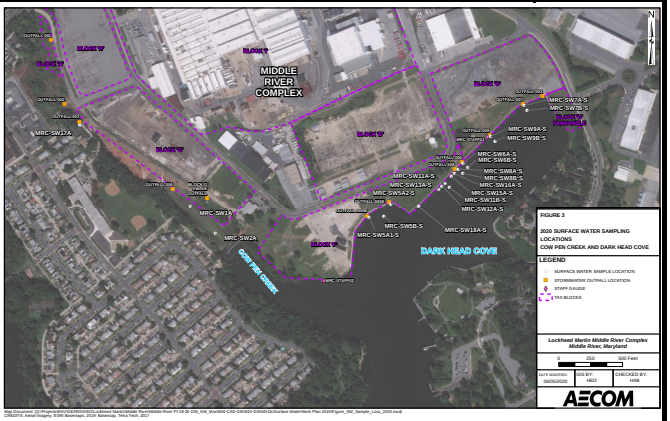
Date: 4/28/2020 Time:1315	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.86**	**5.21**	**13.74**	**3**	**6.66**	**2.8**	**185**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD | **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex
Project No.: 60555202
Sample ID No.: MRC-SW12A-S-20200428
Sample Location: MRC-SW12A
Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

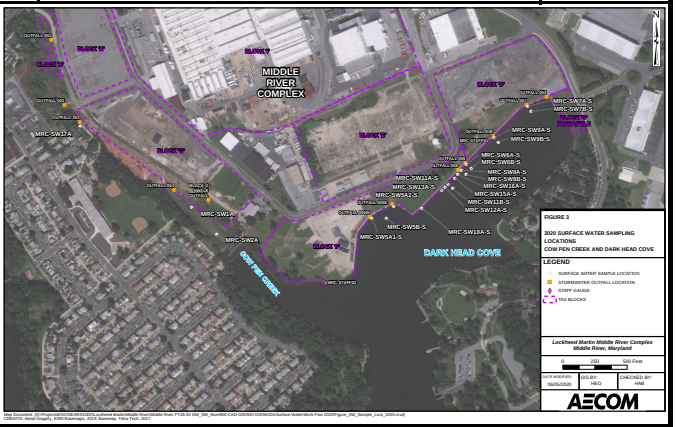
Date: 4/28/2020 Time:1330	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.92**	**5.18**	**13.99**	**2**	**7.79**	**2.8**	**187**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW13A-S-20200428 Project No.: 60555202 Sample Location: MRC-SW13A-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data
[] Monitoring Well Data
[X] Other: Tidal Creek - Freshwater
[] QA Sample Type: _____

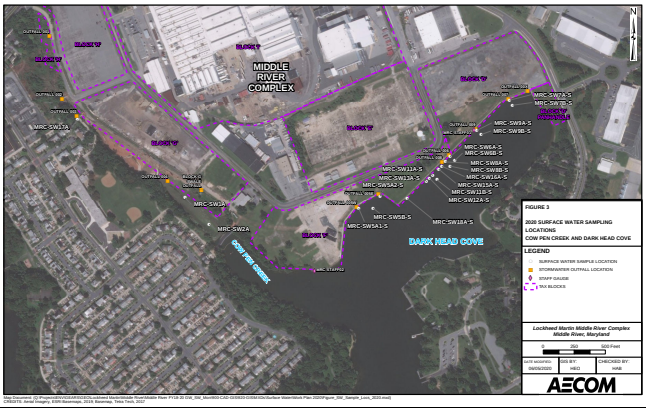
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:1340	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.96**	**5.22**	**13.96**	**2**	**6.84**	**2.8**	**186**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW15A-S-20200428

Project No.: 60555202 Sample Location: MRC-SW15A-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data

[] Monitoring Well Data

[X] Other: Tidal Creek - Freshwater

[] QA Sample Type: _____

Type of Sample:

[X] Low Concentration

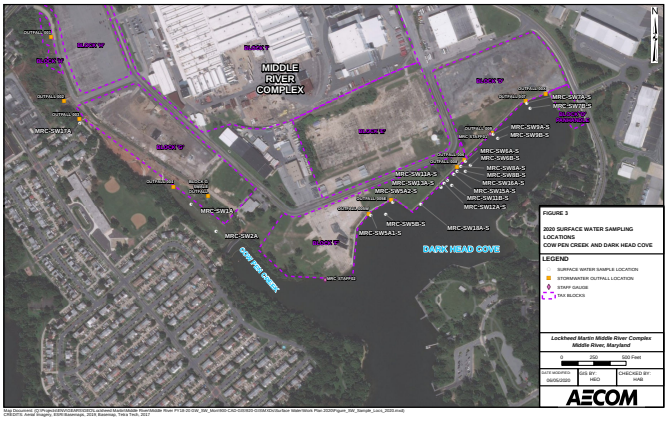
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 Time:1025	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.58**	**5.28**	**13.37**	**1**	**6.36**	**2.8**	**180**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD	**Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW16A-S-20200428

Project No.: 60555202 Sample Location: MRC-SW16A-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data

[] Monitoring Well Data

[X] Other: Tidal Creek - Freshwater

[] QA Sample Type: _____

Type of Sample:

[X] Low Concentration

[] High Concentration

SAMPLING DATA:

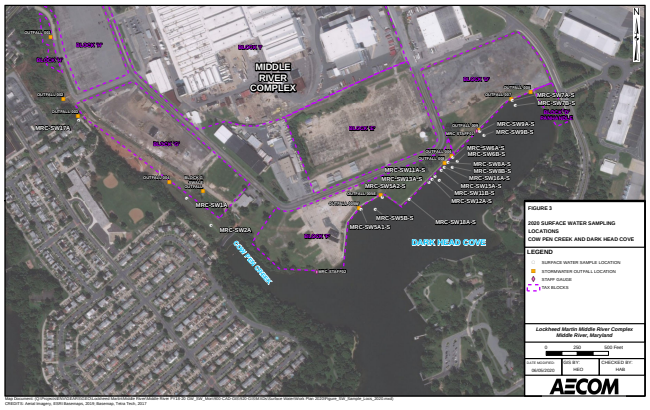
	Color (Visual)	pH (S.U.)	S.C. (µS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (ppt	ORP (mV)
Date: 4/28/2020 Time:1015								
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.46**	**5.2**	**13.5**	**0.6**	**6.00**	**2.8**	**178**

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID:

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW17A-20200428

Project No.: 60555202 Sample Location: MRC-SW17A

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data

[] Monitoring Well Data

[X] Other: Tidal Creek - Freshwater

[] QA Sample Type:

Type of Sample:

[X] Low Concentration

[] High Concentration

SAMPLING DATA:

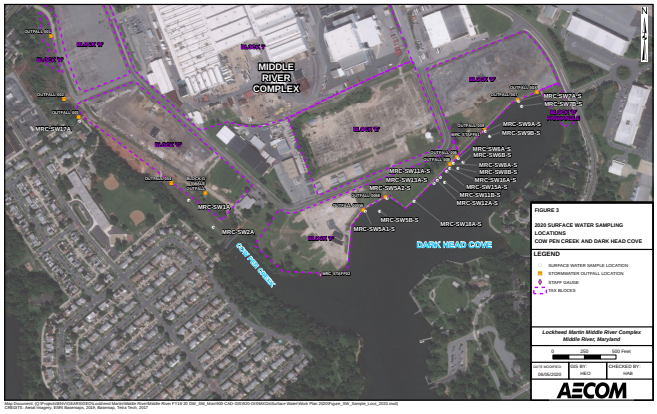
Date: 4/28/2020 Time:1730	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF02 1520: 0.6 feet 1610: 0.6 feet	**Clear**	**7.89**	**0.408**	**11.73**	**3**	**9.4**	**0.200**	**72**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4-dioxane (8270D/SIM)	None	2 - 1 L ambers	Yes

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD:

Duplicate ID:

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW18A-S-20200428

Project No.: 60555202 Sample Location: MRC-SW18A-S

Sampled By: Victoria Kirkpatrick

[] Domestic Well Data

[] Monitoring Well Data

[X] Other: Tidal Creek - Freshwater

[] QA Sample Type: _____

Type of Sample:

[X] Low Concentration

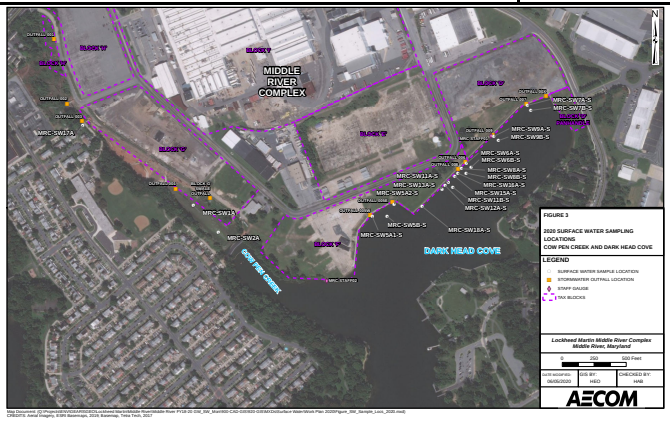
[] High Concentration

SAMPLING DATA:

Date: 4/28/2020 1400	**Color** (Visual)	**pH** (S.U.)	**S.C.** (µS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (ppt)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 0834: 0.4 feet 1512: 0.9 feet	**Clear**	**7.93**	**5.2**	**14.15**	**1**	**7.12**	**2.800**	**190**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
PCB Homologs (680)	None	2 - 1L ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	



Circle if Applicable:

MS/MSD: **Duplicate ID:**

Signature:

APPENDIX B
Data Validation Report

Data Validation and Usability Report

April 2020 – Triannual Surface Water Sampling

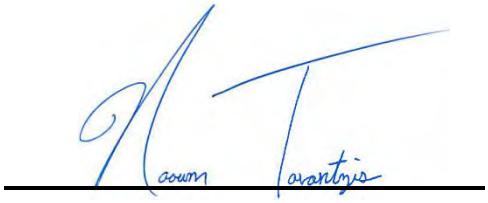
Lockheed Martin Corporation
Middle River Complex
Middle River, Maryland

June 2020

IDENTIFICATION FORM

Data Validation and Data Usability Review

Zachary Neigh
Data Validator
AECOM
06/15/2020



Naoum Tavantzis
Project Chemist
AECOM
06/15/2020

Table of Contents

I. Executive Summary

AECOM performed data validation on 100% of the surface water field investigative samples collected on April 28th, 2020 at the Lockheed Martin Middle River Complex located in Middle River, Maryland. The validation was performed to a United States Environmental Protection Agency (USEPA) Region III Inorganic Level I and Organic Level I based on the specifics of the analytical methods referenced and qualified according to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic/Inorganic (January 2017) Superfund Data Review, with the exception of blank detections which were qualified according to the USEPA Region III modifications to the National Functional Guidelines defining the use of the "B" flag.

The review was assisted using an electronic data management tool that compiles batch-level quality control (QC) data submitted with the laboratory deliverables and identifies anomalies for verification and qualification by the data reviewer. This information is provided in the form of a structured workbook that includes field sample analytical results, QC sample results, batch associations, and QC criteria. Prior to validation, the quality assurance procedures applied to the process itself consist of reviewing the output for data completeness based on laboratory deliverables and chain of custody reports; verification of QC criteria based on the aforementioned data validation guidelines and project-specific Quality Assurance Project Plan (QAPP); and strict control of data management permissions. The resulting data validation workbooks were evaluated and validated using the AECOM automated validation assistant (AVA) tool. The specific data elements that were reviewed include:

- Holding times and sample preservation
- Blanks (Method, Trip, Field, and Equipment)
- Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Surrogate spike results
- Field duplicates
- Laboratory duplicates
- Sensitivity

Data validation qualifiers were applied to results where a QC nonconformance required qualification per USEPA guidance. QC anomalies were assessed for their impact on data quality in regard to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) as discussed in **II: PARCCS Data Quality**. A detailed list of the QC non-conformances can be found in **III: Data Validation Findings**. The associated field sample results that required qualification are listed in **IV: Qualified Field Sample Results**.

II. PARCCS Data Quality

Precision

Precision is the degree of agreement among repeated measurements of the same characteristic on the same sample or on separate samples collected as close as possible in time and place. Field sampling precision is measured using the field duplicate relative percent differences; laboratory precision is measured using laboratory duplicate relative percent differences and/or laboratory control spike and matrix spike duplicate relative percent differences (RPD). Quality control criteria impacting precision were met for the data reviewed.

The field duplicate pair performed on MRC-SW6A-S-20200428 displayed an RPD greater than 35% for acetone. The positive associated parent sample and field duplicate results were qualified J,fd. These anomalies are considered minor and the qualified field sample results should be considered usable as estimated values.

Accuracy

Accuracy is a measure of confidence in a measurement. The smaller the difference between the measurement of a parameter and its "true" or expected value, the more accurate the measurement. Analytical accuracy was assessed through the measurement of percent recoveries in the surrogate spikes, laboratory control spike pairs (LCS/LCSD) and the matrix spike pairs (MS/MSD).

During the volatile organic compound (VOC) analysis, the MS/MSDs performed on parent samples MRC-SW7B-S-20200428, MRC-SW8A-S-20200428, and MRC-SW8B-S-20200428 displayed several percent recoveries outside the QC limits. The parent sample results associated with percent recoveries greater than the QC limits were non-detect, therefore, no data qualifying action was required. Three MS/MSDs displayed percent recoveries less than 10% for 2-chloroethylvinyl ether at 0%. However, the analyte 2-chloroethylvinyl ether is subject to hydrolysis in preserved vials at low pH and is a known poor-performer in MS/MSD analysis with QC limits of 1% to 150%. The laboratory followed their procedures for reporting the analyte and the MS/MSD anomalies reported are not considered to be representative of the site matrix. Therefore the 0% MS/MSD recoveries of this analyte are not considered to be major anomalies. The associated parent sample results were non-detect and were qualified UJ,m. The parent sample results associated with remaining percent recoveries less than the lower QC limits but greater than 10% were non-detect and were qualified UJ,m. These anomalies are considered minor and the qualified field sample results should be considered usable as estimated values with a negative bias.

Representativeness

Representativeness is the qualitative expression of the degree to which data accurately reflect site conditions. Factors that affect the representativeness of analytical data include appropriate sample population definitions, proper sample collection and preservation techniques, analytical holding times, use of standard analytical methods, and determination of matrix or analyte interferences.

Representativeness is also monitored using negative controls such as trip blanks, field blanks, and equipment blanks, along with adherence to the standard operating procedures and sampling plans.

Method blanks were prepared at a frequency of one per laboratory QC batch and a total of one (1) trip blank was analyzed, at a rate of one per VOC sample cooler. These blanks were used as negative controls to assess data quality. In one instance, method blanks displayed a detection greater than the method detection limit (MDL). The affected analyte was methylene chloride, a common laboratory contaminant. The associated field sample result was non-detect, therefore no data qualifying action was taken. In one instance, the trip blank, TB-20200428, displayed a detection greater than the method detection limit for chloroform. The associated positive field sample result displayed a concentration within five times the trip blank detection and was qualified B,bt. The qualified field sample result should be considered a potential false positive.

Comparability

Comparability is the extent to which data from one study can be compared directly to either past data from the current project or data from another study. Using standardized sampling and analytical methods, units of reporting, and site selection procedures helps ensure comparability. Standard field sampling methods and current CLP analytical methods by an accredited laboratory were used in this investigation.

In the previous surface water sampling events that took place in April 2018 and April 2019, total dichlorobiphenyls were detected ubiquitously in surface water at low concentrations that were most commonly near the MDL and less than the reporting limit. The 2020 surface water PCB homolog analysis reported non-detect results for total dichlorobiphenyls in all field samples submitted. The surface water locations that were previously sampled in 2018 and 2019 each displayed detections for total dichlorobiphenyls at that time. However, the MDLs reported for total dichlorobiphenyls in April 2020 (maximum MDL of 0.0047 µg/L) were on average 1.76 times greater than those reported in April 2019 (maximum MDL of 0.0025 µg/L). Four reported detections for dichlorobiphenyls in 2019 were reported at concentrations lower than the 2020 method detection limits, ergo four positive results from 2019 would have been reported as non-detect in 2020 due to the increased method detection limits. Remaining dichlorobiphenyls concentrations detected in April 2019 were greater than the 2020 method detection limits but less than the 2020 reporting limits and would have been considered as estimated detections. Raw data was obtained from the laboratory and April 2020 non-detect results were examined as part of this review. The laboratory correctly reported all results as non-detect and performed a thorough review of their own on the instrument data. The laboratory analyst was not able to distinguish responses for dichlorobiphenyl isomers from baseline noise. After further inquiry, ALS Middletown was able to revise the reported MDL in the April 2020 SWS data for total dichlorobiphenyls using lower MDL study results obtained in December 2019. The April 2020 SWS samples were re-evaluated against the revised MDLs using the laboratory's data processing software and were shown to be non-detect with the revised MDLs. The revised MDLs were approximately equal to the MDLs reported from ALS-Rochester in April 2019 and the lowest

detected concentration of total dichlorobiphenyls in April 2019 was greater than the highest revised April 2020 MDL. Therefore, the revised MDLs are considered to be consistent with the previous sampling events and will be reported in AECOM's deliverables.

Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount of data expected under normal conditions. It is expected that laboratories will provide data meeting system quality control acceptance criteria for all samples tested. Project completeness is determined by evaluating the planned versus actual quantities of usable data. A total of 24 field samples were validated, including twenty-one (21) investigative surface water samples, two (2) field duplicates, and one (1) trip blank. The Data are usable, as qualified, for their intended purpose based on the data reviewed.

Sensitivity

Sensitivity reflects the ability of the analytical method to detect analytes of interest below the level of concern. This goal is achieved by identifying the level of concern, choosing a method with appropriate method detection limits, and ensuring that the laboratory analyzes calibration standards at or below the level of concern. The laboratory was able to achieve the lowest reporting limits based on the analytical methods employed and the variety of matrices encountered. No field sample results were reported from dilutions. Analytes detected below the reporting limit and above the method detection limit were reported and qualified "J" as estimated values by the laboratory.

Overall Impact on Data Usability

Overall data usability met the completeness requirement outlined in the QAPP at 100%. During the data validation, several minor anomalies were noted which is to be anticipated based on statistical predictability of standard analytical procedures. A limited number of field sample results were qualified due to these minor anomalies. The Data are considered usable as qualified, for their intended purpose based on the data reviewed.

III. Data Validation Findings

Volatile Organic Compounds

SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	No Anomalies			
Method Blank	Detection > MDL	3129287	Methylene chloride	0.51 ug/l (0.45 ug/l)
Trip Blank	Detection > MDL	TB-20200428	Chloroform	0.46 ug/l (0.21 ug/l)
LCS/LCSD	No Anomalies			
MS/MSD	MS/MSD % Recovery	MRC-SW7B-S-20200428	1,1-Dichloroethylene	135% (63-128%)
		MRC-SW7B-S-20200428	2-Chloroethylvinylether	0%/0% (1-150%)
		MRC-SW7B-S-20200428	Trans-1,2-Dichloroethene	129% (71-122%)
		MRC-SW7B-S-20200428	Trichlorofluoromethane	131% (38-123%)
		MRC-SW8A-S-20200428	2-Chloroethylvinylether	0%/0% (1-150%)
		MRC-SW8A-S-20200428	Bromomethane	34.2%/41.3% (45-148%)
		MRC-SW8B-S-20200428	1,1-Dichloroethylene	142%/141% (63-128%)
		MRC-SW8B-S-20200428	1,2-Dichloroethylene (total)	127%/127% (78-125%)
		MRC-SW8B-S-20200428	2-Chloroethylvinylether	0%/0% (1-150%)
		MRC-SW8B-S-20200428	Benzene	128%/129% (80-124%)
		MRC-SW8B-S-20200428	Trans-1,2-Dichloroethene	130%/131% (71-122%)
Surrogate Spike	No Anomalies			
Laboratory Duplicates	No Anomalies			
Field Duplicates	RPD > 35%	MRC-SW6A-S-20200428	Acetone	151% (35%)

1,4-Dioxane

SW846-8270D-SIM	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	No Anomalies			
Method Blanks	No Anomalies			
LCS/LCSD	No Anomalies			
MS/MSD	No Anomalies			
Surrogate Spike	No Anomalies			
Field Duplicates	No Anomalies			

PCB Homologs

EPA Method 680	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	No Anomalies			
Method Blanks	No Anomalies			
LCS/LCSD	No Anomalies			
MS/MSD	No Anomalies			
Surrogate Spike	No Anomalies			

PCB Homologs

EPA Method 680	Description	Sample ID	Analyte	Value (Control Limit)
Field Duplicates	No Anomalies			

IV. Qualified Field Sample Results

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
MRC-SW17A-S-20200428	SW8260C	Chloroform	0.42	ug/l	B	bt
MRC-SW6A-S-20200428	SW8260C	Acetone	36.9	ug/l	J	fd
MRC-SW6A-S-DUP-20200428	SW8260C	Acetone	5.1	ug/l	J	fd
MRC-SW7B-S-20200428	SW8260C	2-Chloroethylvinylether	ND	ug/l	UJ	m
MRC-SW8A-S-20200428	SW8260C	2-Chloroethylvinylether	ND	ug/l	UJ	m
MRC-SW8A-S-20200428	SW8260C	Bromomethane	ND	ug/l	UJ	m
MRC-SW8B-S-20200428	SW8260C	2-Chloroethylvinylether	ND	ug/l	UJ	m

Appendix A
Data Validation Qualifiers and Reason Codes

Data Qualifying Codes

Two types of data qualifying codes or flags are applied in the course of the data review. The data validation flags indicate data that are not usable for decision-making, more than normally biased and/or variable, or not representative of field conditions. These codes and their definitions are presented below in the hierarchy stipulated in the USEPA Contract Laboratory Program National Functional Guidelines for Organic (January 2017) Data Review.

Data Validation Flags

Flag	Interpretation
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but not detected at a level greater than or equal to the level of the adjusted Detection Limit (DL) for sample and method.
J+	Reported value may not be accurate or precise, but the result may be biased high.
J-	Reported value may not be accurate or precise, but the result may be biased low.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected at a level greater than or equal to the adjusted DL. However, the reported adjusted DL is approximate and may be inaccurate or imprecise.
C	This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by gas Chromatograph/Mass Spectrometer (GC/MS)
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

The other type of code used by AECOM is a “Reason Code”. The reason code indicates the type of quality control failure that led to the application of the data validation flag.

Reason Codes

Code	*Description*	*Code*	*Description*
a	Tracer recovery (radiochemical data only)	**ld**	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
be	Equipment blank contamination	**lp**	Laboratory control sample/laboratory control sample duplicate RPDs
bf	Field blank contamination	**m**	Matrix spike recovery
bi	Bias indeterminate	**md**	Matrix spike/matrix spike duplicate RPD
bl	Laboratory blank contamination	**nb**	Negative laboratory blank contamination
bm	Missing Blank Information	**p**	Chemical preservation issue
bt	Trip Blank	**pe**	Post Extraction Spike
c	Calibration issue	**ps**	Performance Evaluation Sample
cl	Clean-up standard recovery	**q**	Quantitation issue
cp	Insufficient in growth (radiochemical data only)	**r**	Dual column RPD
cr	Chromatographic resolution	**rp**	Re-extraction precision issue [PAHs only]
d	Reporting limit raised due to chromatographic interference	**rt**	SIM ions not within + 2 seconds
dt	Dissolved result > total over limit	**s**	Surrogate recovery
e	Exceedance of PQL	**sc**	Sample collection issues
fd	Field duplicate RPDs	**sp**	Sample preparation issue
g	Chromatographic pattern match issue	**su**	Evidence of ion suppression
h	Holding times	**t**	Temperature Preservation Issue
i	Internal standard areas	**u**	High combined sample result uncertainty (radiochemical data only)
ii	Injection internal standard area or retention time exceedance	**v**	Compound identification issue
k	Estimated Maximum Possible Concentrations	**x**	Low % solids
l	LCS recoveries	**y**	Serial dilution results
lc	Labeled compound recovery	**z**	ICS results

APPENDIX C
Laboratory Analytical Report

ALS Environmental

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

July 8, 2020

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Revised Report - 7/8/2020 8:54:04 AM - See workorder comment section for explanation

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**3099594**
Purchase Order:	**118437**	Workorder ID:	**LM MRC 2020 April SWS**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, April 29, 2020.

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 Mrs. Vanessa N Badman (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.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Patrick Gratton , Mr. Zachary Neigh , Mr. Naoum Tavantzis

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

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3099594001	MRC-SW7B-S-20200428	Water	4/28/2020 08:50	4/29/2020 18:40	Collected by Client
3099594002	MRC-SW9B-S-20200428	Water	4/28/2020 09:15	4/29/2020 18:40	Collected by Client
3099594003	MRC-SW11A-S-20200428	Water	4/28/2020 13:05	4/29/2020 18:40	Collected by Client
3099594004	MRC-SW9A-S-20200428	Water	4/28/2020 09:05	4/29/2020 18:40	Collected by Client
3099594005	MRC-SW6B-S-20200428	Water	4/28/2020 10:00	4/29/2020 18:40	Collected by Client
3099594006	TB-20200428	Water	4/28/2020 08:40	4/29/2020 18:40	Collected by Client
3099594007	MRC-SW7A-S-20200428	Water	4/28/2020 08:40	4/29/2020 18:40	Collected by Client
3099594008	MRC-SW11B-S-20200428	Water	4/28/2020 13:15	4/29/2020 18:40	Collected by Client
3099594009	MRC-SW15A-S-20200428	Water	4/28/2020 10:25	4/29/2020 18:40	Collected by Client
3099594010	MRC-SW16A-S-20200428	Water	4/28/2020 10:15	4/29/2020 18:40	Collected by Client
3099594011	MRC-SW18A-S-20200428	Water	4/28/2020 14:00	4/29/2020 18:40	Collected by Client
3099594012	MRC-SW6A-S-20200428	Water	4/28/2020 09:30	4/29/2020 18:40	Collected by Client
3099594013	MRC-SW6A-S-DUP-20200428	Water	4/28/2020 09:35	4/29/2020 18:40	Collected by Client
3099594014	MRC-SW17A-S-20200428	Water	4/28/2020 17:30	4/29/2020 18:40	Collected by Client
3099594015	MRC-SW8A-S-20200428	Water	4/28/2020 11:45	4/29/2020 18:40	Collected by Client
3099594016	MRC-SW5A2-S-20200428	Water	4/28/2020 14:15	4/29/2020 18:40	Collected by Client
3099594017	MRC-SW13A-S-20200428	Water	4/28/2020 13:40	4/29/2020 18:40	Collected by Client
3099594018	MRC-SW5A1-S-20200428	Water	4/28/2020 14:40	4/29/2020 18:40	Collected by Client
3099594019	MRC-SW5B-S-20200428	Water	4/28/2020 14:25	4/29/2020 18:40	Collected by Client
3099594020	MRC-SW1A-20200428	Water	4/28/2020 15:40	4/29/2020 18:40	Collected by Client
3099594021	MRC-SW2A-20200428	Water	4/28/2020 15:30	4/29/2020 18:40	Collected by Client
3099594022	MRC-SW12A-S-20200428	Water	4/28/2020 13:30	4/29/2020 18:40	Collected by Client
3099594023	MRC-SW1A-DUP-20200428	Water	4/28/2020 15:45	4/29/2020 18:40	Collected by Client
3099594024	MRC-SW8B-S-20200428	Water	4/28/2020 12:20	4/29/2020 18:40	Collected by Client

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SAMPLE SUMMARY

Workorder: 3099594 LM MRC 2020 April SWS

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

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)
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 at the RDL
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

PROJECT SUMMARY

Workorder: 3099594 LM MRC 2020 April SWS

Workorder Comments

This report was modified to update the dichlorobiphenyl homolog group method detection limit for the EPA Method 680 analysis.
AJL 7/7/2020

Sample Comments

Lab ID: 3099594001 **Sample ID:** MRC-SW7B-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594002 **Sample ID:** MRC-SW9B-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594003 **Sample ID:** MRC-SW11A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594004 **Sample ID:** MRC-SW9A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594005 **Sample ID:** MRC-SW6B-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594007 **Sample ID:** MRC-SW7A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594008 **Sample ID:** MRC-SW11B-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594009 **Sample ID:** MRC-SW15A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594010 **Sample ID:** MRC-SW16A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594011 **Sample ID:** MRC-SW18A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

PROJECT SUMMARY

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: 3099594012 **Sample ID:** MRC-SW6A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594013 **Sample ID:** MRC-SW6A-S-DUP-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594015 **Sample ID:** MRC-SW8A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594016 **Sample ID:** MRC-SW5A2-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594017 **Sample ID:** MRC-SW13A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594018 **Sample ID:** MRC-SW5A1-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594019 **Sample ID:** MRC-SW5B-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594022 **Sample ID:** MRC-SW12A-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

Lab ID: 3099594024 **Sample ID:** MRC-SW8B-S-20200428 **Sample Type:** SAMPLE

ALS-Middletown does not hold NELAP accreditation for EPA Method 680.

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594001** Date Collected: 4/28/2020 08:50 Matrix: Water

Sample ID: **MRC-SW7B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	10.5		ug/L	10.0	3.1	SW846 8260C		5/1/20 03:59	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/1/20 03:59	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 03:59	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 03:59	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/1/20 03:59	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260C		5/1/20 03:59	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/1/20 03:59	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260C		5/1/20 03:59	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 03:59	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/1/20 03:59	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 03:59	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 03:59	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 03:59	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 03:59	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 03:59	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
2-Chloroethylvinyl ether	ND	4,5	ug/L	2.0	0.38	SW846 8260C		5/1/20 03:59	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/1/20 03:59	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 03:59	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 03:59	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 03:59	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/1/20 03:59	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 03:59	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 03:59	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/1/20 03:59	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 03:59	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 03:59	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 03:59	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A
1,1-Dichloroethene	ND	2	ug/L	1.0	0.29	SW846 8260C		5/1/20 03:59	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/1/20 03:59	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594001** Date Collected: 4/28/2020 08:50 Matrix: Water

Sample ID: **MRC-SW7B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND	3	ug/L	1.0	0.26	SW846 8260C		5/1/20 03:59	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 03:59	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 03:59	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 03:59	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 03:59	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/1/20 03:59	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 03:59	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 03:59	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 03:59	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 03:59	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/1/20 03:59	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/1/20 03:59	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 03:59	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/1/20 03:59	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 03:59	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/1/20 03:59	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 03:59	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/1/20 03:59	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 03:59	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 03:59	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 03:59	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 03:59	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 03:59	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/1/20 03:59	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/1/20 03:59	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/1/20 03:59	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 03:59	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 03:59	PDK	A
Trichlorofluoromethane	ND	1	ug/L	1.0	0.24	SW846 8260C		5/1/20 03:59	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 03:59	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 03:59	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/1/20 03:59	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 03:59	PDK	A

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594001** Date Collected: 4/28/2020 08:50 Matrix: Water

Sample ID: **MRC-SW7B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/1/20 03:59	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/1/20 03:59	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260C			5/1/20 03:59	PDK	A
4-Bromofluorobenzene (S)	98.6		%	79 - 114		SW846 8260C			5/1/20 03:59	PDK	A
Dibromofluoromethane (S)	95.6		%	78 - 116		SW846 8260C			5/1/20 03:59	PDK	A
Toluene-d8 (S)	93.9		%	76 - 127		SW846 8260C			5/1/20 03:59	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.055	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.0099	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0033	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.044	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Octachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0066	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0077	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0044	EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	81		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Terphenyl-d14 (S)	91.4		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C
Tetrachloro-m-xylene (S)	63.1		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 21:01	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594002** Date Collected: 4/28/2020 09:15 Matrix: Water

Sample ID: **MRC-SW9B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	10.5		ug/L	10.0	3.1	SW846 8260C		5/1/20 04:22	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/1/20 04:22	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 04:22	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 04:22	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/1/20 04:22	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260C		5/1/20 04:22	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/1/20 04:22	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260C		5/1/20 04:22	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 04:22	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/1/20 04:22	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:22	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 04:22	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:22	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 04:22	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 04:22	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/1/20 04:22	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/1/20 04:22	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:22	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 04:22	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 04:22	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/1/20 04:22	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 04:22	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:22	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/1/20 04:22	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 04:22	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 04:22	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 04:22	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 04:22	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/1/20 04:22	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594002** Date Collected: 4/28/2020 09:15 Matrix: Water

Sample ID: **MRC-SW9B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 04:22	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 04:22	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 04:22	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:22	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 04:22	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/1/20 04:22	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 04:22	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 04:22	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 04:22	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 04:22	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/1/20 04:22	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/1/20 04:22	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 04:22	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/1/20 04:22	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 04:22	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/1/20 04:22	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 04:22	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/1/20 04:22	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 04:22	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 04:22	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 04:22	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 04:22	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 04:22	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/1/20 04:22	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/1/20 04:22	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/1/20 04:22	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 04:22	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:22	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 04:22	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 04:22	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 04:22	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/1/20 04:22	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 04:22	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594002** Date Collected: 4/28/2020 09:15 Matrix: Water

Sample ID: **MRC-SW9B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/1/20 04:22	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/1/20 04:22	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260C			5/1/20 04:22	PDK	A
4-Bromofluorobenzene (S)	99.7		%	79 - 114		SW846 8260C			5/1/20 04:22	PDK	A
Dibromofluoromethane (S)	96.5		%	78 - 116		SW846 8260C			5/1/20 04:22	PDK	A
Toluene-d8 (S)	94.8		%	76 - 127		SW846 8260C			5/1/20 04:22	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.054	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0027	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.0098	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0033	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.043	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Octachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0065	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0076	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0043	EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	77.6		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Terphenyl-d14 (S)	90		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C
Tetrachloro-m-xylene (S)	56.4		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 22:01	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594003** Date Collected: 4/28/2020 13:05 Matrix: Water

Sample ID: **MRC-SW11A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	19.1		ug/L	10.0	3.1	SW846 8260C		5/1/20 04:45	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/1/20 04:45	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 04:45	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 04:45	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/1/20 04:45	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260C		5/1/20 04:45	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/1/20 04:45	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260C		5/1/20 04:45	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 04:45	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/1/20 04:45	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:45	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 04:45	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:45	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 04:45	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 04:45	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/1/20 04:45	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/1/20 04:45	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:45	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 04:45	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 04:45	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/1/20 04:45	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 04:45	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:45	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/1/20 04:45	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 04:45	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 04:45	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 04:45	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 04:45	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/1/20 04:45	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594003** Date Collected: 4/28/2020 13:05 Matrix: Water

Sample ID: **MRC-SW11A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 04:45	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 04:45	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 04:45	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 04:45	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 04:45	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/1/20 04:45	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 04:45	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 04:45	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 04:45	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 04:45	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/1/20 04:45	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/1/20 04:45	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 04:45	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/1/20 04:45	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 04:45	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/1/20 04:45	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 04:45	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/1/20 04:45	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 04:45	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 04:45	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 04:45	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 04:45	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 04:45	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/1/20 04:45	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/1/20 04:45	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/1/20 04:45	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 04:45	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 04:45	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 04:45	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 04:45	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 04:45	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/1/20 04:45	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 04:45	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594003** Date Collected: 4/28/2020 13:05 Matrix: Water
Sample ID: **MRC-SW11A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/1/20 04:45	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/1/20 04:45	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260C			5/1/20 04:45	PDK	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260C			5/1/20 04:45	PDK	A
Dibromofluoromethane (S)	94.6		%	78 - 116		SW846 8260C			5/1/20 04:45	PDK	A
Toluene-d8 (S)	93.3		%	76 - 127		SW846 8260C			5/1/20 04:45	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.054	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0027	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.032	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.0097	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0032	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.043	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Octachlorobiphenyls	ND		ug/L	0.032	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0065	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0075	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0043	EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	87.8		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Terphenyl-d14 (S)	93.8		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C
Tetrachloro-m-xylene (S)	71		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 04:54	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594004** Date Collected: 4/28/2020 09:05 Matrix: Water

Sample ID: **MRC-SW9A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	44.4		ug/L	10.0	3.1	SW846 8260C		5/4/20 23:29	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/4/20 23:29	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/4/20 23:29	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/4/20 23:29	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/4/20 23:29	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/4/20 23:29	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/4/20 23:29	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/4/20 23:29	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/4/20 23:29	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/4/20 23:29	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:29	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/4/20 23:29	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:29	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/4/20 23:29	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/4/20 23:29	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/4/20 23:29	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/4/20 23:29	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:29	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/4/20 23:29	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/4/20 23:29	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/4/20 23:29	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/4/20 23:29	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:29	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/4/20 23:29	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/4/20 23:29	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/4/20 23:29	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/4/20 23:29	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/4/20 23:29	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/4/20 23:29	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594004** Date Collected: 4/28/2020 09:05 Matrix: Water

Sample ID: **MRC-SW9A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/4/20 23:29	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/4/20 23:29	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/4/20 23:29	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:29	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/4/20 23:29	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/4/20 23:29	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/4/20 23:29	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/4/20 23:29	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/4/20 23:29	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/4/20 23:29	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/4/20 23:29	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/4/20 23:29	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/4/20 23:29	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/4/20 23:29	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/4/20 23:29	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/4/20 23:29	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/4/20 23:29	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/4/20 23:29	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/4/20 23:29	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/4/20 23:29	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/4/20 23:29	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/4/20 23:29	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/4/20 23:29	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/4/20 23:29	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/4/20 23:29	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/4/20 23:29	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/4/20 23:29	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:29	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/4/20 23:29	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/4/20 23:29	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/4/20 23:29	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/4/20 23:29	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/4/20 23:29	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594004** Date Collected: 4/28/2020 09:05 Matrix: Water

Sample ID: **MRC-SW9A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/4/20 23:29	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/4/20 23:29	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99.2		%	62 - 133		SW846 8260C			5/4/20 23:29	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/4/20 23:29	PDK	A
Dibromofluoromethane (S)	90.9		%	78 - 116		SW846 8260C			5/4/20 23:29	PDK	A
Toluene-d8 (S)	94.6		%	76 - 127		SW846 8260C			5/4/20 23:29	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.056	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.010	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0033	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.044	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Octachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0067	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0078	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0044	EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	76.8		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Terphenyl-d14 (S)	90.7		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C
Tetrachloro-m-xylene (S)	55.5		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 21:31	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594005** Date Collected: 4/28/2020 10:00 Matrix: Water

Sample ID: **MRC-SW6B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	23.9		ug/L	10.0	3.1	SW846 8260C		5/4/20 23:52	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/4/20 23:52	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/4/20 23:52	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/4/20 23:52	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/4/20 23:52	PDK	A
Bromomethane	ND	2	ug/L	1.0	0.39	SW846 8260C		5/4/20 23:52	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/4/20 23:52	PDK	A
tert-Butyl Alcohol	ND	1	ug/L	10.0	2.2	SW846 8260C		5/4/20 23:52	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/4/20 23:52	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/4/20 23:52	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:52	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/4/20 23:52	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:52	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/4/20 23:52	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/4/20 23:52	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/4/20 23:52	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/4/20 23:52	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:52	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/4/20 23:52	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/4/20 23:52	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/4/20 23:52	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/4/20 23:52	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:52	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/4/20 23:52	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/4/20 23:52	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/4/20 23:52	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/4/20 23:52	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/4/20 23:52	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/4/20 23:52	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594005** Date Collected: 4/28/2020 10:00 Matrix: Water

Sample ID: **MRC-SW6B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/4/20 23:52	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/4/20 23:52	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/4/20 23:52	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/4/20 23:52	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/4/20 23:52	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/4/20 23:52	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/4/20 23:52	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/4/20 23:52	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/4/20 23:52	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/4/20 23:52	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/4/20 23:52	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/4/20 23:52	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/4/20 23:52	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/4/20 23:52	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/4/20 23:52	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/4/20 23:52	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/4/20 23:52	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/4/20 23:52	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/4/20 23:52	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/4/20 23:52	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/4/20 23:52	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/4/20 23:52	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/4/20 23:52	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/4/20 23:52	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/4/20 23:52	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/4/20 23:52	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/4/20 23:52	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
Trichloroethene	0.69J	J	ug/L	1.0	0.33	SW846 8260C		5/4/20 23:52	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/4/20 23:52	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/4/20 23:52	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/4/20 23:52	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/4/20 23:52	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/4/20 23:52	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594005** Date Collected: 4/28/2020 10:00 Matrix: Water

Sample ID: **MRC-SW6B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/4/20 23:52	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/4/20 23:52	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100		%	62 - 133		SW846 8260C			5/4/20 23:52	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/4/20 23:52	PDK	A
Dibromofluoromethane (S)	91.5		%	78 - 116		SW846 8260C			5/4/20 23:52	PDK	A
Toluene-d8 (S)	94.3		%	76 - 127		SW846 8260C			5/4/20 23:52	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.056	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Heptachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Hexachlorobiphenyls	ND		ug/L	0.022	0.010	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Monochlorobiphenyls	ND		ug/L	0.011	0.0034	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Nonachlorobiphenyls	ND		ug/L	0.045	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Octachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Pentachlorobiphenyls	ND		ug/L	0.022	0.0067	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0079	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Trichlorobiphenyls	ND		ug/L	0.011	0.0045	EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	77.9		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Terphenyl-d14 (S)	86.3		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
Tetrachloro-m-xylene (S)	60.2		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 23:30	DHF	E
SEMIVOLATILE SIM											
1,4-Dioxane	0.028J	J	ug/L	0.11	0.015	8270 SIM	4/30/20 11:45	DXL	5/1/20 02:59	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 02:59	DHF	C
Fluoranthene-d10 (S)	75.2		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 02:59	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594006** Date Collected: 4/28/2020 08:40 Matrix: Water

Sample ID: **TB-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	ND		ug/L	10.0	3.1	SW846 8260C		5/1/20 02:28	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/1/20 02:28	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 02:28	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 02:28	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/1/20 02:28	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260C		5/1/20 02:28	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/1/20 02:28	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260C		5/1/20 02:28	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 02:28	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/1/20 02:28	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 02:28	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 02:28	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 02:28	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 02:28	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 02:28	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/1/20 02:28	PDK	A
Chloroform	0.46J	J	ug/L	1.0	0.21	SW846 8260C		5/1/20 02:28	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 02:28	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 02:28	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 02:28	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/1/20 02:28	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 02:28	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 02:28	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/1/20 02:28	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 02:28	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 02:28	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/1/20 02:28	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 02:28	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/1/20 02:28	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594006** Date Collected: 4/28/2020 08:40 Matrix: Water

Sample ID: **TB-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 02:28	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/1/20 02:28	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 02:28	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/1/20 02:28	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/1/20 02:28	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/1/20 02:28	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 02:28	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/1/20 02:28	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 02:28	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/1/20 02:28	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/1/20 02:28	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/1/20 02:28	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 02:28	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/1/20 02:28	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 02:28	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/1/20 02:28	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/1/20 02:28	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/1/20 02:28	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 02:28	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 02:28	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/1/20 02:28	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/1/20 02:28	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/1/20 02:28	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/1/20 02:28	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/1/20 02:28	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/1/20 02:28	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/1/20 02:28	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/1/20 02:28	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/1/20 02:28	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/1/20 02:28	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/1/20 02:28	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/1/20 02:28	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/1/20 02:28	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594006** Date Collected: 4/28/2020 08:40 Matrix: Water

Sample ID: **TB-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/1/20 02:28	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/1/20 02:28	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110		%	62 - 133		SW846 8260C			5/1/20 02:28	PDK	A
4-Bromofluorobenzene (S)	99.9		%	79 - 114		SW846 8260C			5/1/20 02:28	PDK	A
Dibromofluoromethane (S)	96.9		%	78 - 116		SW846 8260C			5/1/20 02:28	PDK	A
Toluene-d8 (S)	93.3		%	76 - 127		SW846 8260C			5/1/20 02:28	PDK	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594007** Date Collected: 4/28/2020 08:40 Matrix: Water

Sample ID: **MRC-SW7A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	9.2J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 00:14	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 00:14	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 00:14	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 00:14	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 00:14	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 00:14	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 00:14	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 00:14	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 00:14	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 00:14	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:14	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 00:14	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:14	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 00:14	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 00:14	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 00:14	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 00:14	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:14	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 00:14	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 00:14	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 00:14	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 00:14	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:14	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 00:14	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 00:14	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 00:14	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 00:14	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 00:14	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 00:14	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594007** Date Collected: 4/28/2020 08:40 Matrix: Water

Sample ID: **MRC-SW7A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 00:14	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 00:14	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 00:14	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:14	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 00:14	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 00:14	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 00:14	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 00:14	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 00:14	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 00:14	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 00:14	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 00:14	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 00:14	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 00:14	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 00:14	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 00:14	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 00:14	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 00:14	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 00:14	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 00:14	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 00:14	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 00:14	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 00:14	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 00:14	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 00:14	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 00:14	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 00:14	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:14	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 00:14	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 00:14	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 00:14	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 00:14	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 00:14	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594007** Date Collected: 4/28/2020 08:40 Matrix: Water

Sample ID: **MRC-SW7A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 00:14	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 00:14	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260C			5/5/20 00:14	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 00:14	PDK	A
Dibromofluoromethane (S)	92.5		%	78 - 116		SW846 8260C			5/5/20 00:14	PDK	A
Toluene-d8 (S)	93.8		%	76 - 127		SW846 8260C			5/5/20 00:14	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.056	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.010	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0033	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.044	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Octachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0067	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0078	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0044	EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	87.1		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Terphenyl-d14 (S)	99.2		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C
Tetrachloro-m-xylene (S)	61.3		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 20:32	DHF	C

Vanessa N. Badman

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594008** Date Collected: 4/28/2020 13:15 Matrix: Water

Sample ID: **MRC-SW11B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	12.4		ug/L	10.0	3.1	SW846 8260C		5/5/20 00:37	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 00:37	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 00:37	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 00:37	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 00:37	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 00:37	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 00:37	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 00:37	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 00:37	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 00:37	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:37	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 00:37	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:37	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 00:37	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 00:37	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 00:37	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 00:37	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:37	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 00:37	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 00:37	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 00:37	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 00:37	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:37	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 00:37	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 00:37	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 00:37	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 00:37	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 00:37	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 00:37	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594008** Date Collected: 4/28/2020 13:15 Matrix: Water

Sample ID: **MRC-SW11B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 00:37	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 00:37	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 00:37	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 00:37	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 00:37	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 00:37	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 00:37	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 00:37	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 00:37	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 00:37	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 00:37	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 00:37	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 00:37	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 00:37	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 00:37	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 00:37	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 00:37	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 00:37	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 00:37	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 00:37	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 00:37	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 00:37	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 00:37	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 00:37	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 00:37	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 00:37	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 00:37	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 00:37	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 00:37	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 00:37	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 00:37	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 00:37	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 00:37	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594008** Date Collected: 4/28/2020 13:15 Matrix: Water

Sample ID: **MRC-SW11B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 00:37	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 00:37	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100		%	62 - 133		SW846 8260C			5/5/20 00:37	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 00:37	PDK	A
Dibromofluoromethane (S)	92.5		%	78 - 116		SW846 8260C			5/5/20 00:37	PDK	A
Toluene-d8 (S)	93.6		%	76 - 127		SW846 8260C			5/5/20 00:37	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.055	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0027	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.0099	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0033	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.044	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Octachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0066	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0077	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0044	EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	65.5		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Terphenyl-d14 (S)	67		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C
Tetrachloro-m-xylene (S)	52.7		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 05:24	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594009** Date Collected: 4/28/2020 10:25 Matrix: Water

Sample ID: **MRC-SW15A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	24.8		ug/L	10.0	3.1	SW846 8260C		5/5/20 01:00	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 01:00	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:00	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:00	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 01:00	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 01:00	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 01:00	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 01:00	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 01:00	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 01:00	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:00	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:00	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:00	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 01:00	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 01:00	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 01:00	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 01:00	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:00	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:00	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:00	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 01:00	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 01:00	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:00	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 01:00	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:00	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:00	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 01:00	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:00	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 01:00	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594009** Date Collected: 4/28/2020 10:25 Matrix: Water

Sample ID: **MRC-SW15A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:00	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:00	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:00	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:00	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:00	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 01:00	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:00	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 01:00	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 01:00	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:00	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 01:00	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 01:00	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 01:00	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 01:00	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 01:00	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 01:00	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 01:00	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 01:00	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:00	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 01:00	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 01:00	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 01:00	PDK	A
Toluene	0.39J	J	ug/L	1.0	0.23	SW846 8260C		5/5/20 01:00	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 01:00	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 01:00	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 01:00	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 01:00	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
Trichloroethene	0.87J	J	ug/L	1.0	0.33	SW846 8260C		5/5/20 01:00	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:00	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 01:00	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:00	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 01:00	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 01:00	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594009** Date Collected: 4/28/2020 10:25 Matrix: Water
Sample ID: **MRC-SW15A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 01:00	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 01:00	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260C			5/5/20 01:00	PDK	A
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260C			5/5/20 01:00	PDK	A
Dibromofluoromethane (S)	94		%	78 - 116		SW846 8260C			5/5/20 01:00	PDK	A
Toluene-d8 (S)	95.2		%	76 - 127		SW846 8260C			5/5/20 01:00	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.050	0.020	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Dichlorobiphenyls	ND		ug/L	0.010	0.0025	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.030	0.011	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.020	0.0090	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Monochlorobiphenyls	ND		ug/L	0.010	0.0030	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.040	0.020	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Octachlorobiphenyls	ND		ug/L	0.030	0.011	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.020	0.0060	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.020	0.0070	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Trichlorobiphenyls	ND		ug/L	0.010	0.0040	EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	75.5		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Terphenyl-d14 (S)	83		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C
Tetrachloro-m-xylene (S)	52.7		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/5/20 00:30	DHF	C

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594010** Date Collected: 4/28/2020 10:15 Matrix: Water

Sample ID: **MRC-SW16A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	34.4		ug/L	10.0	3.1	SW846 8260C		5/5/20 01:23	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 01:23	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:23	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:23	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 01:23	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 01:23	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 01:23	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 01:23	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 01:23	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 01:23	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:23	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:23	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:23	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 01:23	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 01:23	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 01:23	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 01:23	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:23	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:23	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:23	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 01:23	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 01:23	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:23	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 01:23	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:23	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:23	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 01:23	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:23	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 01:23	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594010** Date Collected: 4/28/2020 10:15 Matrix: Water

Sample ID: **MRC-SW16A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:23	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:23	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:23	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:23	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:23	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 01:23	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:23	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 01:23	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 01:23	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:23	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 01:23	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 01:23	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 01:23	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 01:23	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 01:23	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 01:23	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 01:23	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 01:23	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:23	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 01:23	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 01:23	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 01:23	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:23	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 01:23	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 01:23	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 01:23	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 01:23	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
Trichloroethene	0.90J	J	ug/L	1.0	0.33	SW846 8260C		5/5/20 01:23	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:23	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 01:23	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:23	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 01:23	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 01:23	PDK	A

ALS Environmental

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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

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594010** Date Collected: 4/28/2020 10:15 Matrix: Water

Sample ID: **MRC-SW16A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 01:23	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 01:23	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260C			5/5/20 01:23	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/5/20 01:23	PDK	A
Dibromofluoromethane (S)	93.3		%	78 - 116		SW846 8260C			5/5/20 01:23	PDK	A
Toluene-d8 (S)	94.1		%	76 - 127		SW846 8260C			5/5/20 01:23	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.056	0.022	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.010	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0034	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.045	0.022	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Octachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0067	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0078	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0045	EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	74.6		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Terphenyl-d14 (S)	84.6		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C
Tetrachloro-m-xylene (S)	55.9		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/5/20 00:00	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594011** Date Collected: 4/28/2020 14:00 Matrix: Water

Sample ID: **MRC-SW18A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	14.3		ug/L	10.0	3.1	SW846 8260C		5/5/20 01:45	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 01:45	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:45	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:45	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 01:45	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 01:45	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 01:45	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 01:45	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 01:45	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 01:45	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:45	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:45	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:45	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 01:45	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 01:45	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 01:45	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 01:45	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:45	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:45	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:45	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 01:45	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 01:45	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:45	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 01:45	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:45	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:45	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 01:45	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:45	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 01:45	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594011** Date Collected: 4/28/2020 14:00 Matrix: Water

Sample ID: **MRC-SW18A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:45	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 01:45	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:45	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 01:45	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 01:45	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 01:45	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:45	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 01:45	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 01:45	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 01:45	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 01:45	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 01:45	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 01:45	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 01:45	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 01:45	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 01:45	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 01:45	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 01:45	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:45	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 01:45	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 01:45	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 01:45	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 01:45	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 01:45	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 01:45	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 01:45	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 01:45	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 01:45	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 01:45	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 01:45	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 01:45	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 01:45	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 01:45	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594011** Date Collected: 4/28/2020 14:00 Matrix: Water

Sample ID: **MRC-SW18A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 01:45	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 01:45	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260C			5/5/20 01:45	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 01:45	PDK	A
Dibromofluoromethane (S)	91.8		%	78 - 116		SW846 8260C			5/5/20 01:45	PDK	A
Toluene-d8 (S)	92.6		%	76 - 127		SW846 8260C			5/5/20 01:45	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.053	0.021	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0026	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.032	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.021	0.0095	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0032	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.042	0.021	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Octachlorobiphenyls	ND		ug/L	0.032	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.021	0.0063	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.021	0.0074	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0042	EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	63.2		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Terphenyl-d14 (S)	65.8		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C
Tetrachloro-m-xylene (S)	50.6		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 06:53	DHF	C

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594012** Date Collected: 4/28/2020 09:30 Matrix: Water

Sample ID: **MRC-SW6A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	36.9		ug/L	10.0	3.1	SW846 8260C		5/5/20 02:08	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 02:08	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:08	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:08	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 02:08	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 02:08	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 02:08	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 02:08	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 02:08	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 02:08	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:08	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:08	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:08	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 02:08	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 02:08	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 02:08	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 02:08	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:08	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:08	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:08	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 02:08	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 02:08	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:08	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 02:08	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:08	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:08	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 02:08	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:08	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 02:08	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594012** Date Collected: 4/28/2020 09:30 Matrix: Water

Sample ID: **MRC-SW6A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:08	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:08	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:08	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:08	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:08	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 02:08	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:08	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 02:08	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 02:08	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:08	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 02:08	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 02:08	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 02:08	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 02:08	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 02:08	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 02:08	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 02:08	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 02:08	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:08	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 02:08	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 02:08	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 02:08	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:08	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 02:08	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 02:08	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 02:08	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 02:08	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
Trichloroethene	1.3		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:08	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:08	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 02:08	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:08	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 02:08	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 02:08	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594012** Date Collected: 4/28/2020 09:30 Matrix: Water

Sample ID: **MRC-SW6A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 02:08	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 02:08	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260C			5/5/20 02:08	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/5/20 02:08	PDK	A
Dibromofluoromethane (S)	93.5		%	78 - 116		SW846 8260C			5/5/20 02:08	PDK	A
Toluene-d8 (S)	94.9		%	76 - 127		SW846 8260C			5/5/20 02:08	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.056	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.010	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0034	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.045	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Octachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0067	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0078	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0045	EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	73		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Terphenyl-d14 (S)	83.9		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
Tetrachloro-m-xylene (S)	53.1		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 22:31	DHF	C
SEMIVOLATILE SIM											
1,4-Dioxane	0.026J	J	ug/L	0.10	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 02:05	DHF	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	55.2		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 02:05	DHF	
Fluoranthene-d10 (S)	78.8		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 02:05	DHF	

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594013** Date Collected: 4/28/2020 09:35 Matrix: Water

Sample ID: **MRC-SW6A-S-DUP-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	5.1J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 02:31	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 02:31	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:31	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:31	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 02:31	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 02:31	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 02:31	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 02:31	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 02:31	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 02:31	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:31	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:31	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:31	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 02:31	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 02:31	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 02:31	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 02:31	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:31	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:31	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:31	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 02:31	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 02:31	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:31	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 02:31	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:31	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:31	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 02:31	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:31	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 02:31	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594013** Date Collected: 4/28/2020 09:35 Matrix: Water

Sample ID: **MRC-SW6A-S-DUP-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:31	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:31	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:31	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:31	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:31	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 02:31	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:31	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 02:31	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 02:31	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:31	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 02:31	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 02:31	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 02:31	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 02:31	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 02:31	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 02:31	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 02:31	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 02:31	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:31	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 02:31	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 02:31	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 02:31	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:31	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 02:31	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 02:31	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 02:31	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 02:31	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:31	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:31	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 02:31	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:31	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 02:31	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 02:31	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594013** Date Collected: 4/28/2020 09:35 Matrix: Water
Sample ID: **MRC-SW6A-S-DUP-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 02:31	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 02:31	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260C			5/5/20 02:31	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 02:31	PDK	A
Dibromofluoromethane (S)	93.3		%	78 - 116		SW846 8260C			5/5/20 02:31	PDK	A
Toluene-d8 (S)	93.5		%	76 - 127		SW846 8260C			5/5/20 02:31	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.056	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0028	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.010	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0034	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.045	0.022	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Octachlorobiphenyls	ND		ug/L	0.034	0.012	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0067	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0078	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0045	EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	80		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Terphenyl-d14 (S)	87.9		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
Tetrachloro-m-xylene (S)	59.5		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/4/20 23:01	DHF	C
SEMIVOLATILE SIM											
1,4-Dioxane	0.029J	J	ug/L	0.10	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 02:32	DHF	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	59.5		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 02:32	DHF	E
Fluoranthene-d10 (S)	80.4		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 02:32	DHF	E

Vanessa N. Badman
Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594014** Date Collected: 4/28/2020 17:30 Matrix: Water

Sample ID: **MRC-SW17A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	7.6J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 02:53	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 02:53	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:53	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:53	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 02:53	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 02:53	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 02:53	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 02:53	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 02:53	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 02:53	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:53	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:53	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:53	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 02:53	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 02:53	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 02:53	PDK	A
Chloroform	0.42J	J	ug/L	1.0	0.21	SW846 8260C		5/5/20 02:53	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:53	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:53	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:53	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 02:53	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 02:53	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:53	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 02:53	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:53	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:53	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 02:53	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:53	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 02:53	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594014** Date Collected: 4/28/2020 17:30 Matrix: Water

Sample ID: **MRC-SW17A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:53	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 02:53	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:53	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 02:53	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 02:53	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 02:53	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:53	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 02:53	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 02:53	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 02:53	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 02:53	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 02:53	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 02:53	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 02:53	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 02:53	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 02:53	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 02:53	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 02:53	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:53	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 02:53	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 02:53	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 02:53	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 02:53	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 02:53	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 02:53	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 02:53	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 02:53	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 02:53	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 02:53	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 02:53	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 02:53	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 02:53	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 02:53	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594014** Date Collected: 4/28/2020 17:30 Matrix: Water

Sample ID: **MRC-SW17A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 02:53	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 02:53	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260C			5/5/20 02:53	PDK	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260C			5/5/20 02:53	PDK	A
Dibromofluoromethane (S)	91.2		%	78 - 116		SW846 8260C			5/5/20 02:53	PDK	A
Toluene-d8 (S)	93.2		%	76 - 127		SW846 8260C			5/5/20 02:53	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.032J	J	ug/L	0.11	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 07:27	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	51.9		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 07:27	DHF	C
Fluoranthene-d10 (S)	82.2		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 07:27	DHF	C

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594015** Date Collected: 4/28/2020 11:45 Matrix: Water

Sample ID: **MRC-SW8A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	22.0		ug/L	10.0	3.1	SW846 8260C		5/5/20 03:16	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 03:16	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 03:16	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 03:16	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 03:16	PDK	A
Bromomethane	ND	1,2, 3	ug/L	1.0	0.39	SW846 8260C		5/5/20 03:16	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 03:16	PDK	A
tert-Butyl Alcohol	2.2J	J,4	ug/L	10.0	2.2	SW846 8260C		5/5/20 03:16	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 03:16	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 03:16	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:16	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 03:16	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:16	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 03:16	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 03:16	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
2-Chloroethylvinyl ether	ND	5,6	ug/L	2.0	0.38	SW846 8260C		5/5/20 03:16	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 03:16	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:16	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 03:16	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 03:16	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 03:16	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 03:16	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:16	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 03:16	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 03:16	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 03:16	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 03:16	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 03:16	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 03:16	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594015** Date Collected: 4/28/2020 11:45 Matrix: Water

Sample ID: **MRC-SW8A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 03:16	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 03:16	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 03:16	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:16	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 03:16	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 03:16	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 03:16	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 03:16	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 03:16	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 03:16	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 03:16	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 03:16	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 03:16	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 03:16	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 03:16	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 03:16	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 03:16	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 03:16	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 03:16	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 03:16	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 03:16	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 03:16	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 03:16	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 03:16	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 03:16	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 03:16	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 03:16	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
Trichloroethene	2.2		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:16	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 03:16	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 03:16	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 03:16	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 03:16	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 03:16	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594015** Date Collected: 4/28/2020 11:45 Matrix: Water

Sample ID: **MRC-SW8A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 03:16	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 03:16	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260C			5/5/20 03:16	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 03:16	PDK	A
Dibromofluoromethane (S)	93.1		%	78 - 116		SW846 8260C			5/5/20 03:16	PDK	A
Toluene-d8 (S)	92.5		%	76 - 127		SW846 8260C			5/5/20 03:16	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.059	0.024	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Dichlorobiphenyls	ND		ug/L	0.012	0.0029	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Heptachlorobiphenyls	ND		ug/L	0.035	0.013	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Hexachlorobiphenyls	ND		ug/L	0.024	0.011	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Monochlorobiphenyls	ND		ug/L	0.012	0.0035	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Nonachlorobiphenyls	ND		ug/L	0.047	0.024	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Octachlorobiphenyls	ND		ug/L	0.035	0.013	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Pentachlorobiphenyls	ND		ug/L	0.024	0.0071	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Tetrachlorobiphenyls	ND		ug/L	0.024	0.0082	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Trichlorobiphenyls	ND		ug/L	0.012	0.0047	EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	70.7		%	52 - 118		EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Terphenyl-d14 (S)	79.8		%	46 - 133		EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
Tetrachloro-m-xylene (S)	45.8		%	30 - 133		EPA 680	4/30/20 17:35	DXL	5/5/20 01:00	DHF	M
SEMIVOLATILE SIM											
1,4-Dioxane	0.028J	J	ug/L	0.12	0.015	8270 SIM	4/30/20 11:45	DXL	5/1/20 03:26	DHF	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	55.1		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 03:26	DHF	G
Fluoranthene-d10 (S)	76.8		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 03:26	DHF	G

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594016** Date Collected: 4/28/2020 14:15 Matrix: Water

Sample ID: **MRC-SW5A2-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	7.3J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 03:39	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 03:39	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 03:39	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 03:39	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 03:39	PDK	A
Bromomethane	ND	2	ug/L	1.0	0.39	SW846 8260C		5/5/20 03:39	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 03:39	PDK	A
tert-Butyl Alcohol	2.3J	J,1	ug/L	10.0	2.2	SW846 8260C		5/5/20 03:39	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 03:39	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 03:39	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:39	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 03:39	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:39	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 03:39	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 03:39	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 03:39	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 03:39	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:39	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 03:39	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 03:39	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 03:39	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 03:39	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:39	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 03:39	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 03:39	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 03:39	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 03:39	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 03:39	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 03:39	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594016** Date Collected: 4/28/2020 14:15 Matrix: Water

Sample ID: **MRC-SW5A2-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 03:39	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 03:39	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 03:39	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 03:39	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 03:39	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 03:39	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 03:39	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 03:39	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 03:39	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 03:39	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 03:39	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 03:39	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 03:39	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 03:39	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 03:39	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 03:39	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 03:39	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 03:39	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 03:39	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 03:39	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 03:39	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 03:39	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 03:39	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 03:39	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 03:39	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 03:39	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 03:39	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 03:39	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 03:39	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 03:39	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 03:39	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 03:39	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 03:39	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594016** Date Collected: 4/28/2020 14:15 Matrix: Water

Sample ID: **MRC-SW5A2-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 03:39	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 03:39	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260C			5/5/20 03:39	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/5/20 03:39	PDK	A
Dibromofluoromethane (S)	92.9		%	78 - 116		SW846 8260C			5/5/20 03:39	PDK	A
Toluene-d8 (S)	92.9		%	76 - 127		SW846 8260C			5/5/20 03:39	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.054	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0027	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.0098	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0033	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.043	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Octachlorobiphenyls	ND		ug/L	0.033	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0065	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0076	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0043	EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	81.7		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Terphenyl-d14 (S)	82.2		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C
Tetrachloro-m-xylene (S)	65.6		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 07:23	DHF	C

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Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594017** Date Collected: 4/28/2020 13:40 Matrix: Water

Sample ID: **MRC-SW13A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	26.2		ug/L	10.0	3.1	SW846 8260C		5/5/20 04:02	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 04:02	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:02	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:02	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 04:02	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 04:02	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 04:02	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 04:02	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 04:02	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 04:02	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:02	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:02	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:02	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 04:02	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 04:02	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 04:02	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 04:02	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:02	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:02	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:02	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 04:02	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 04:02	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:02	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 04:02	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:02	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:02	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 04:02	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:02	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 04:02	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594017** Date Collected: 4/28/2020 13:40 Matrix: Water

Sample ID: **MRC-SW13A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:02	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:02	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:02	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:02	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:02	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 04:02	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:02	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 04:02	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 04:02	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:02	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 04:02	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 04:02	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 04:02	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 04:02	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 04:02	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 04:02	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 04:02	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 04:02	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:02	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 04:02	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 04:02	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 04:02	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:02	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 04:02	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 04:02	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 04:02	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 04:02	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:02	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:02	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 04:02	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:02	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 04:02	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 04:02	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594017** Date Collected: 4/28/2020 13:40 Matrix: Water
Sample ID: **MRC-SW13A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 04:02	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 04:02	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260C			5/5/20 04:02	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 04:02	PDK	A
Dibromofluoromethane (S)	92		%	78 - 116		SW846 8260C			5/5/20 04:02	PDK	A
Toluene-d8 (S)	92.5		%	76 - 127		SW846 8260C			5/5/20 04:02	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.051	0.020	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Dichlorobiphenyls	ND		ug/L	0.010	0.0026	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.031	0.011	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.020	0.0092	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Monochlorobiphenyls	ND		ug/L	0.010	0.0031	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.041	0.020	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Octachlorobiphenyls	ND		ug/L	0.031	0.011	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.020	0.0061	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.020	0.0071	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Trichlorobiphenyls	ND		ug/L	0.010	0.0041	EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	75.3		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Terphenyl-d14 (S)	78.7		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C
Tetrachloro-m-xylene (S)	59.6		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 06:23	DHF	C

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594018** Date Collected: 4/28/2020 14:40 Matrix: Water

Sample ID: **MRC-SW5A1-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	7.0J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 04:24	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 04:24	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:24	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:24	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 04:24	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 04:24	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 04:24	PDK	A
tert-Butyl Alcohol	ND	2	ug/L	10.0	2.2	SW846 8260C		5/5/20 04:24	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 04:24	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 04:24	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:24	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:24	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:24	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 04:24	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 04:24	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 04:24	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 04:24	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:24	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:24	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:24	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 04:24	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 04:24	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:24	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 04:24	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:24	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:24	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 04:24	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:24	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 04:24	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594018** Date Collected: 4/28/2020 14:40 Matrix: Water

Sample ID: **MRC-SW5A1-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:24	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:24	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:24	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:24	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:24	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 04:24	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:24	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 04:24	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 04:24	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:24	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 04:24	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 04:24	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 04:24	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 04:24	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 04:24	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 04:24	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 04:24	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 04:24	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:24	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 04:24	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 04:24	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 04:24	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:24	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 04:24	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 04:24	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 04:24	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 04:24	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:24	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:24	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 04:24	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:24	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 04:24	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 04:24	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594018** Date Collected: 4/28/2020 14:40 Matrix: Water

Sample ID: **MRC-SW5A1-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 04:24	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 04:24	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260C			5/5/20 04:24	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/5/20 04:24	PDK	A
Dibromofluoromethane (S)	94.7		%	78 - 116		SW846 8260C			5/5/20 04:24	PDK	A
Toluene-d8 (S)	94.7		%	76 - 127		SW846 8260C			5/5/20 04:24	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.052	0.021	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Dichlorobiphenyls	ND		ug/L	0.010	0.0026	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.031	0.011	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.021	0.0093	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Monochlorobiphenyls	ND		ug/L	0.010	0.0031	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.041	0.021	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Octachlorobiphenyls	ND		ug/L	0.031	0.011	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.021	0.0062	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.021	0.0073	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Trichlorobiphenyls	ND		ug/L	0.010	0.0041	EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	73		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Terphenyl-d14 (S)	76.8		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C
Tetrachloro-m-xylene (S)	58.1		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 08:22	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594019** Date Collected: 4/28/2020 14:25 Matrix: Water

Sample ID: **MRC-SW5B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	7.0J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 04:47	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 04:47	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:47	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:47	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 04:47	PDK	A
Bromomethane	ND	2	ug/L	1.0	0.39	SW846 8260C		5/5/20 04:47	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 04:47	PDK	A
tert-Butyl Alcohol	ND	1	ug/L	10.0	2.2	SW846 8260C		5/5/20 04:47	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 04:47	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 04:47	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:47	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:47	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:47	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 04:47	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 04:47	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 04:47	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 04:47	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:47	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:47	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:47	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 04:47	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 04:47	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:47	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 04:47	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:47	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:47	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 04:47	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:47	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 04:47	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594019** Date Collected: 4/28/2020 14:25 Matrix: Water

Sample ID: **MRC-SW5B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:47	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 04:47	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:47	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 04:47	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 04:47	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 04:47	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:47	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 04:47	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 04:47	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 04:47	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 04:47	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 04:47	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 04:47	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 04:47	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 04:47	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 04:47	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 04:47	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 04:47	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:47	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 04:47	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 04:47	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 04:47	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 04:47	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 04:47	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 04:47	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 04:47	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 04:47	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 04:47	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 04:47	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 04:47	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 04:47	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 04:47	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 04:47	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594019** Date Collected: 4/28/2020 14:25 Matrix: Water

Sample ID: **MRC-SW5B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 04:47	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 04:47	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260C			5/5/20 04:47	PDK	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260C			5/5/20 04:47	PDK	A
Dibromofluoromethane (S)	94.1		%	78 - 116		SW846 8260C			5/5/20 04:47	PDK	A
Toluene-d8 (S)	93		%	76 - 127		SW846 8260C			5/5/20 04:47	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.054	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Dichlorobiphenyls	ND		ug/L	0.011	0.0027	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.032	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.022	0.0097	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Monochlorobiphenyls	ND		ug/L	0.011	0.0032	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.043	0.022	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Octachlorobiphenyls	ND		ug/L	0.032	0.012	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.022	0.0065	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.022	0.0076	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Trichlorobiphenyls	ND		ug/L	0.011	0.0043	EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	92.8		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Terphenyl-d14 (S)	95.6		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C
Tetrachloro-m-xylene (S)	74.7		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 07:53	DHF	C

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594020** Date Collected: 4/28/2020 15:40 Matrix: Water

Sample ID: **MRC-SW1A-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	8.2J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 05:10	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 05:10	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:10	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:10	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 05:10	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 05:10	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 05:10	PDK	A
tert-Butyl Alcohol	3.4J	J,2	ug/L	10.0	2.2	SW846 8260C		5/5/20 05:10	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 05:10	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 05:10	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:10	PDK	A
Carbon Disulfide	0.35J	J	ug/L	1.0	0.23	SW846 8260C		5/5/20 05:10	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:10	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 05:10	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 05:10	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 05:10	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 05:10	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:10	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:10	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:10	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 05:10	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 05:10	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:10	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 05:10	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:10	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:10	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 05:10	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:10	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 05:10	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594020** Date Collected: 4/28/2020 15:40 Matrix: Water

Sample ID: **MRC-SW1A-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:10	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:10	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:10	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:10	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:10	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 05:10	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:10	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 05:10	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 05:10	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:10	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 05:10	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 05:10	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 05:10	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 05:10	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 05:10	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 05:10	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 05:10	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 05:10	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:10	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 05:10	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 05:10	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 05:10	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:10	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 05:10	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 05:10	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 05:10	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 05:10	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:10	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:10	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 05:10	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:10	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 05:10	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 05:10	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594020** Date Collected: 4/28/2020 15:40 Matrix: Water

Sample ID: **MRC-SW1A-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 05:10	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 05:10	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	62 - 133		SW846 8260C			5/5/20 05:10	PDK	A
4-Bromofluorobenzene (S)	103		%	79 - 114		SW846 8260C			5/5/20 05:10	PDK	A
Dibromofluoromethane (S)	101		%	78 - 116		SW846 8260C			5/5/20 05:10	PDK	A
Toluene-d8 (S)	93.2		%	76 - 127		SW846 8260C			5/5/20 05:10	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.049J	J	ug/L	0.11	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 06:34	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	51.8		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 06:34	DHF	C
Fluoranthene-d10 (S)	77.1		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 06:34	DHF	C

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594021** Date Collected: 4/28/2020 15:30 Matrix: Water

Sample ID: **MRC-SW2A-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	7.3J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 05:33	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 05:33	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:33	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:33	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 05:33	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 05:33	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 05:33	PDK	A
tert-Butyl Alcohol	2.4J	J,2	ug/L	10.0	2.2	SW846 8260C		5/5/20 05:33	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 05:33	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 05:33	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:33	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:33	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:33	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 05:33	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 05:33	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 05:33	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 05:33	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:33	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:33	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:33	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 05:33	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 05:33	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:33	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 05:33	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:33	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:33	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 05:33	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:33	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 05:33	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594021** Date Collected: 4/28/2020 15:30 Matrix: Water

Sample ID: **MRC-SW2A-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:33	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:33	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:33	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:33	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:33	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 05:33	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:33	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 05:33	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 05:33	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:33	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 05:33	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 05:33	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 05:33	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 05:33	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 05:33	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 05:33	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 05:33	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 05:33	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:33	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 05:33	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 05:33	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 05:33	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:33	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 05:33	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 05:33	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 05:33	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 05:33	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:33	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:33	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 05:33	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:33	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 05:33	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 05:33	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594021** Date Collected: 4/28/2020 15:30 Matrix: Water

Sample ID: **MRC-SW2A-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 05:33	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 05:33	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260C			5/5/20 05:33	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 05:33	PDK	A
Dibromofluoromethane (S)	98.5		%	78 - 116		SW846 8260C			5/5/20 05:33	PDK	A
Toluene-d8 (S)	92.2		%	76 - 127		SW846 8260C			5/5/20 05:33	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.034J	J	ug/L	0.11	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 06:07	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	50.6		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 06:07	DHF	C
Fluoranthene-d10 (S)	77.9		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 06:07	DHF	C

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594022** Date Collected: 4/28/2020 13:30 Matrix: Water

Sample ID: **MRC-SW12A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	23.4		ug/L	10.0	3.1	SW846 8260C		5/5/20 05:55	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 05:55	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:55	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:55	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 05:55	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 05:55	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 05:55	PDK	A
tert-Butyl Alcohol	4.7J	J,2	ug/L	10.0	2.2	SW846 8260C		5/5/20 05:55	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 05:55	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 05:55	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:55	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:55	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:55	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 05:55	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 05:55	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 05:55	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 05:55	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:55	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:55	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:55	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 05:55	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 05:55	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:55	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 05:55	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:55	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:55	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 05:55	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:55	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 05:55	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594022** Date Collected: 4/28/2020 13:30 Matrix: Water

Sample ID: **MRC-SW12A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:55	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 05:55	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:55	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 05:55	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 05:55	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 05:55	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:55	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 05:55	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 05:55	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 05:55	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 05:55	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 05:55	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 05:55	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 05:55	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 05:55	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 05:55	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 05:55	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 05:55	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:55	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 05:55	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 05:55	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 05:55	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 05:55	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 05:55	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 05:55	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 05:55	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 05:55	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
Trichloroethene	0.55J	J	ug/L	1.0	0.33	SW846 8260C		5/5/20 05:55	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 05:55	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 05:55	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 05:55	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 05:55	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 05:55	PDK	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594022** Date Collected: 4/28/2020 13:30 Matrix: Water
Sample ID: **MRC-SW12A-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 05:55	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 05:55	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260C			5/5/20 05:55	PDK	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260C			5/5/20 05:55	PDK	A
Dibromofluoromethane (S)	93.1		%	78 - 116		SW846 8260C			5/5/20 05:55	PDK	A
Toluene-d8 (S)	94.8		%	76 - 127		SW846 8260C			5/5/20 05:55	PDK	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.052	0.021	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Dichlorobiphenyls	ND		ug/L	0.010	0.0026	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Heptachlorobiphenyls	ND		ug/L	0.031	0.011	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Hexachlorobiphenyls	ND		ug/L	0.021	0.0094	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Monochlorobiphenyls	ND		ug/L	0.010	0.0031	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Nonachlorobiphenyls	ND		ug/L	0.042	0.021	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Octachlorobiphenyls	ND		ug/L	0.031	0.011	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Pentachlorobiphenyls	ND		ug/L	0.021	0.0063	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Tetrachlorobiphenyls	ND		ug/L	0.021	0.0073	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Trichlorobiphenyls	ND		ug/L	0.010	0.0042	EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	77.7		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Terphenyl-d14 (S)	83.9		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C
Tetrachloro-m-xylene (S)	60.8		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 05:53	DHF	C

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594023** Date Collected: 4/28/2020 15:45 Matrix: Water

Sample ID: **MRC-SW1A-DUP-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	9.7J	J	ug/L	10.0	3.1	SW846 8260C		5/5/20 06:18	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 06:18	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 06:18	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 06:18	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 06:18	PDK	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260C		5/5/20 06:18	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 06:18	PDK	A
tert-Butyl Alcohol	3.1J	J,2	ug/L	10.0	2.2	SW846 8260C		5/5/20 06:18	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 06:18	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 06:18	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 06:18	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 06:18	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 06:18	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 06:18	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 06:18	PDK	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260C		5/5/20 06:18	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 06:18	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 06:18	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 06:18	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 06:18	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 06:18	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 06:18	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 06:18	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 06:18	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 06:18	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 06:18	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 06:18	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 06:18	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260C		5/5/20 06:18	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594023** Date Collected: 4/28/2020 15:45 Matrix: Water

Sample ID: **MRC-SW1A-DUP-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 06:18	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 06:18	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 06:18	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 06:18	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 06:18	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 06:18	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 06:18	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 06:18	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 06:18	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 06:18	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 06:18	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 06:18	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 06:18	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 06:18	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 06:18	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 06:18	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 06:18	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 06:18	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 06:18	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 06:18	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 06:18	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 06:18	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 06:18	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 06:18	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 06:18	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 06:18	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 06:18	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 06:18	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 06:18	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 06:18	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 06:18	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 06:18	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 06:18	PDK	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594023** Date Collected: 4/28/2020 15:45 Matrix: Water

Sample ID: **MRC-SW1A-DUP-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 06:18	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 06:18	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260C			5/5/20 06:18	PDK	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260C			5/5/20 06:18	PDK	A
Dibromofluoromethane (S)	92		%	78 - 116		SW846 8260C			5/5/20 06:18	PDK	A
Toluene-d8 (S)	95.2		%	76 - 127		SW846 8260C			5/5/20 06:18	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.056J	J	ug/L	0.11	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 07:00	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	58.6		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 07:00	DHF	C
Fluoranthene-d10 (S)	77.1		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 07:00	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594024** Date Collected: 4/28/2020 12:20 Matrix: Water

Sample ID: **MRC-SW8B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	10.5		ug/L	10.0	3.1	SW846 8260C		5/5/20 13:14	DPC	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260C		5/5/20 13:14	DPC	A
Benzene	ND	10,9	ug/L	1.0	0.23	SW846 8260C		5/5/20 13:14	DPC	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 13:14	DPC	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260C		5/5/20 13:14	DPC	A
Bromomethane	ND	3	ug/L	1.0	0.39	SW846 8260C		5/5/20 13:14	DPC	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260C		5/5/20 13:14	DPC	A
tert-Butyl Alcohol	ND	6	ug/L	10.0	2.2	SW846 8260C		5/5/20 13:14	DPC	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 13:14	DPC	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260C		5/5/20 13:14	DPC	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 13:14	DPC	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 13:14	DPC	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 13:14	DPC	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 13:14	DPC	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 13:14	DPC	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
2-Chloroethylvinyl ether	ND	11,12	ug/L	2.0	0.38	SW846 8260C		5/5/20 13:14	DPC	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260C		5/5/20 13:14	DPC	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 13:14	DPC	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 13:14	DPC	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 13:14	DPC	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260C		5/5/20 13:14	DPC	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 13:14	DPC	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 13:14	DPC	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260C		5/5/20 13:14	DPC	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 13:14	DPC	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 13:14	DPC	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260C		5/5/20 13:14	DPC	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A
1,1-Dichloroethene	ND	4,5	ug/L	1.0	0.29	SW846 8260C		5/5/20 13:14	DPC	A
1,2-Dichloroethene, Total	ND	1,2	ug/L	2.0	0.45	SW846 8260C		5/5/20 13:14	DPC	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594024** Date Collected: 4/28/2020 12:20 Matrix: Water

Sample ID: **MRC-SW8B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND	7,8	ug/L	1.0	0.26	SW846 8260C		5/5/20 13:14	DPC	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260C		5/5/20 13:14	DPC	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 13:14	DPC	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260C		5/5/20 13:14	DPC	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260C		5/5/20 13:14	DPC	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260C		5/5/20 13:14	DPC	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 13:14	DPC	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260C		5/5/20 13:14	DPC	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 13:14	DPC	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260C		5/5/20 13:14	DPC	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260C		5/5/20 13:14	DPC	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260C		5/5/20 13:14	DPC	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 13:14	DPC	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260C		5/5/20 13:14	DPC	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 13:14	DPC	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260C		5/5/20 13:14	DPC	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260C		5/5/20 13:14	DPC	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260C		5/5/20 13:14	DPC	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 13:14	DPC	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 13:14	DPC	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260C		5/5/20 13:14	DPC	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260C		5/5/20 13:14	DPC	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260C		5/5/20 13:14	DPC	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260C		5/5/20 13:14	DPC	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260C		5/5/20 13:14	DPC	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260C		5/5/20 13:14	DPC	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260C		5/5/20 13:14	DPC	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
Trichloroethene	0.77J	J	ug/L	1.0	0.33	SW846 8260C		5/5/20 13:14	DPC	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260C		5/5/20 13:14	DPC	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260C		5/5/20 13:14	DPC	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260C		5/5/20 13:14	DPC	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260C		5/5/20 13:14	DPC	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260C		5/5/20 13:14	DPC	A

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ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID: **3099594024** Date Collected: 4/28/2020 12:20 Matrix: Water
Sample ID: **MRC-SW8B-S-20200428** Date Received: 4/29/2020 18:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260C			5/5/20 13:14	DPC	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260C			5/5/20 13:14	DPC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260C			5/5/20 13:14	DPC	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260C			5/5/20 13:14	DPC	A
Dibromofluoromethane (S)	93		%	78 - 116		SW846 8260C			5/5/20 13:14	DPC	A
Toluene-d8 (S)	92.2		%	76 - 127		SW846 8260C			5/5/20 13:14	DPC	A
PCBs											
Decachlorobiphenyl	ND		ug/L	0.058	0.023	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Dichlorobiphenyls	ND		ug/L	0.012	0.0029	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Heptachlorobiphenyls	ND		ug/L	0.035	0.013	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Hexachlorobiphenyls	ND		ug/L	0.023	0.010	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Monochlorobiphenyls	ND		ug/L	0.012	0.0035	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Nonachlorobiphenyls	ND		ug/L	0.046	0.023	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Octachlorobiphenyls	ND		ug/L	0.035	0.013	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Pentachlorobiphenyls	ND		ug/L	0.023	0.0069	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Tetrachlorobiphenyls	ND		ug/L	0.023	0.0081	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Trichlorobiphenyls	ND		ug/L	0.012	0.0046	EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	68.2		%	52 - 118		EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Terphenyl-d14 (S)	71.4		%	46 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
Tetrachloro-m-xylene (S)	54.2		%	30 - 133		EPA 680	5/4/20 06:10	MXL	5/5/20 03:25	DHF	M
SEMIVOLATILE SIM											
1,4-Dioxane	0.028J	J	ug/L	0.11	0.014	8270 SIM	4/30/20 11:45	DXL	5/1/20 04:47	DHF	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	56.8		%	29 - 112		8270 SIM	4/30/20 11:45	DXL	5/1/20 04:47	DHF	G
Fluoranthene-d10 (S)	78.8		%	45 - 130		8270 SIM	4/30/20 11:45	DXL	5/1/20 04:47	DHF	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3099594001	1	MRC-SW7B-S-20200428	SW846 8260C	Trichlorofluoromethane
The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 131 and the control limits were 38 to 123.				
3099594001	2	MRC-SW7B-S-20200428	SW846 8260C	1,1-Dichloroethene
The QC sample type MS for method SW846 8260C was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 135 and the control limits were 63 to 128.				
3099594001	3	MRC-SW7B-S-20200428	SW846 8260C	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260C was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 129 and the control limits were 71 to 122.				
3099594001	4	MRC-SW7B-S-20200428	SW846 8260C	2-Chloroethylvinyl ether
The QC sample type MS for method SW846 8260C was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.				
3099594001	5	MRC-SW7B-S-20200428	SW846 8260C	2-Chloroethylvinyl ether
The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.				
3099594004	1	MRC-SW9A-S-20200428	SW846 8260C	Bromomethane
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.				
3099594004	2	MRC-SW9A-S-20200428	SW846 8260C	tert-Butyl Alcohol
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.				
3099594005	1	MRC-SW6B-S-20200428	SW846 8260C	tert-Butyl Alcohol
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.				
3099594005	2	MRC-SW6B-S-20200428	SW846 8260C	Bromomethane
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.				
3099594007	1	MRC-SW7A-S-20200428	SW846 8260C	Bromomethane
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.				
3099594007	2	MRC-SW7A-S-20200428	SW846 8260C	tert-Butyl Alcohol
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.				
3099594008	1	MRC-SW11B-S-20200428	SW846 8260C	Bromomethane
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.				
3099594008	2	MRC-SW11B-S-20200428	SW846 8260C	tert-Butyl Alcohol
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.				
3099594009	1	MRC-SW15A-S-20200428	SW846 8260C	Bromomethane
The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.				

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

3099594009	2	MRC-SW15A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594010	1	MRC-SW16A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594010	2	MRC-SW16A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594011	1	MRC-SW18A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594011	2	MRC-SW18A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594012	1	MRC-SW6A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594012	2	MRC-SW6A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594013	1	MRC-SW6A-S-DUP-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594013	2	MRC-SW6A-S-DUP-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594014	1	MRC-SW17A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594014	2	MRC-SW17A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594015	1	MRC-SW8A-S-20200428	SW846 8260C	Bromomethane

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 34.2 and the control limits were 45 to 148.

3099594015	2	MRC-SW8A-S-20200428	SW846 8260C	Bromomethane

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 41.3 and the control limits were 45 to 148.

3099594015	3	MRC-SW8A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594015	4	MRC-SW8A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

3099594015	5	MRC-SW8A-S-20200428	SW846 8260C	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.

3099594015	6	MRC-SW8A-S-20200428	SW846 8260C	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.

3099594016	1	MRC-SW5A2-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594016	2	MRC-SW5A2-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594017	1	MRC-SW13A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594017	2	MRC-SW13A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594018	1	MRC-SW5A1-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594018	2	MRC-SW5A1-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594019	1	MRC-SW5B-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594019	2	MRC-SW5B-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594020	1	MRC-SW1A-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594020	2	MRC-SW1A-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594021	1	MRC-SW2A-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594021	2	MRC-SW2A-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594022	1	MRC-SW12A-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

ANALYTICAL RESULTS

Workorder: 3099594 LM MRC 2020 April SWS

3099594022	2	MRC-SW12A-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594023	1	MRC-SW1A-DUP-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 126 and the control limits were 80 to 120.

3099594023	2	MRC-SW1A-DUP-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 50.9 and the control limits were 80 to 120.

3099594024	1	MRC-SW8B-S-20200428	SW846 8260C	1,2-Dichloroethene, Total

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 127 and the control limits were 78 to 125.

3099594024	2	MRC-SW8B-S-20200428	SW846 8260C	1,2-Dichloroethene, Total

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 127 and the control limits were 78 to 125.

3099594024	3	MRC-SW8B-S-20200428	SW846 8260C	Bromomethane

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 61.9 and the control limits were 80 to 120.

3099594024	4	MRC-SW8B-S-20200428	SW846 8260C	1,1-Dichloroethene

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 142 and the control limits were 63 to 128.

3099594024	5	MRC-SW8B-S-20200428	SW846 8260C	1,1-Dichloroethene

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 141 and the control limits were 63 to 128.

3099594024	6	MRC-SW8B-S-20200428	SW846 8260C	tert-Butyl Alcohol

The QC sample type CCV for method SW846 8260C was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 138 and the control limits were 80 to 120.

3099594024	7	MRC-SW8B-S-20200428	SW846 8260C	trans-1,2-Dichloroethene

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 130 and the control limits were 71 to 122.

3099594024	8	MRC-SW8B-S-20200428	SW846 8260C	trans-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 131 and the control limits were 71 to 122.

3099594024	9	MRC-SW8B-S-20200428	SW846 8260C	Benzene

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Benzene. The % Recovery was reported as 128 and the control limits were 80 to 124.

3099594024	10	MRC-SW8B-S-20200428	SW846 8260C	Benzene

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte Benzene. The % Recovery was reported as 129 and the control limits were 80 to 124.

3099594024	11	MRC-SW8B-S-20200428	SW846 8260C	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260C was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.

3099594024	12	MRC-SW8B-S-20200428	SW846 8260C	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3099594001	MRC-SW7B-S-20200428	EPA 680	EPA 680	
3099594001	MRC-SW7B-S-20200428	SW846 8260C		
3099594002	MRC-SW9B-S-20200428	EPA 680	EPA 680	
3099594002	MRC-SW9B-S-20200428	SW846 8260C		
3099594003	MRC-SW11A-S-20200428	EPA 680	EPA 680	
3099594003	MRC-SW11A-S-20200428	SW846 8260C		
3099594004	MRC-SW9A-S-20200428	EPA 680	EPA 680	
3099594004	MRC-SW9A-S-20200428	SW846 8260C		
3099594005	MRC-SW6B-S-20200428	8270 SIM	SW846 3510C	
3099594005	MRC-SW6B-S-20200428	EPA 680	EPA 680	
3099594005	MRC-SW6B-S-20200428	SW846 8260C		
3099594006	TB-20200428	SW846 8260C		
3099594007	MRC-SW7A-S-20200428	EPA 680	EPA 680	
3099594007	MRC-SW7A-S-20200428	SW846 8260C		
3099594008	MRC-SW11B-S-20200428	EPA 680	EPA 680	
3099594008	MRC-SW11B-S-20200428	SW846 8260C		
3099594009	MRC-SW15A-S-20200428	EPA 680	EPA 680	
3099594009	MRC-SW15A-S-20200428	SW846 8260C		
3099594010	MRC-SW16A-S-20200428	EPA 680	EPA 680	
3099594010	MRC-SW16A-S-20200428	SW846 8260C		
3099594011	MRC-SW18A-S-20200428	EPA 680	EPA 680	
3099594011	MRC-SW18A-S-20200428	SW846 8260C		
3099594012	MRC-SW6A-S-20200428	8270 SIM	SW846 3510C	
3099594012	MRC-SW6A-S-20200428	EPA 680	EPA 680	
3099594012	MRC-SW6A-S-20200428	SW846 8260C		
3099594013	MRC-SW6A-S-DUP-20200428	8270 SIM	SW846 3510C	
3099594013	MRC-SW6A-S-DUP-20200428	EPA 680	EPA 680	
3099594013	MRC-SW6A-S-DUP-20200428	SW846 8260C		
3099594014	MRC-SW17A-S-20200428	8270 SIM	SW846 3510C	
3099594014	MRC-SW17A-S-20200428	SW846 8260C		
3099594015	MRC-SW8A-S-20200428	8270 SIM	SW846 3510C	
3099594015	MRC-SW8A-S-20200428	EPA 680	EPA 680	
3099594015	MRC-SW8A-S-20200428	SW846 8260C		
3099594016	MRC-SW5A2-S-20200428	EPA 680	EPA 680	
3099594016	MRC-SW5A2-S-20200428	SW846 8260C		
3099594017	MRC-SW13A-S-20200428	EPA 680	EPA 680	
3099594017	MRC-SW13A-S-20200428	SW846 8260C		
3099594018	MRC-SW5A1-S-20200428	EPA 680	EPA 680	
3099594018	MRC-SW5A1-S-20200428	SW846 8260C		
3099594019	MRC-SW5B-S-20200428	EPA 680	EPA 680	
3099594019	MRC-SW5B-S-20200428	SW846 8260C		
3099594020	MRC-SW1A-20200428	8270 SIM	SW846 3510C	
3099594020	MRC-SW1A-20200428	SW846 8260C		
3099594021	MRC-SW2A-20200428	8270 SIM	SW846 3510C	
3099594021	MRC-SW2A-20200428	SW846 8260C		
3099594022	MRC-SW12A-S-20200428	EPA 680	EPA 680	

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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

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3099594022	MRC-SW12A-S-20200428	SW846 8260C		
3099594023	MRC-SW1A-DUP-20200428	8270 SIM	SW846 3510C	
3099594023	MRC-SW1A-DUP-20200428	SW846 8260C		
3099594024	MRC-SW8B-S-20200428	8270 SIM	SW846 3510C	
3099594024	MRC-SW8B-S-20200428	EPA 680	EPA 680	
3099594024	MRC-SW8B-S-20200428	SW846 8260C		

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

QC Batch: EXTR/60288 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 3099594005, 3099594012, 3099594013, 3099594014, 3099594015, 3099594020, 3099594021, 3099594023, 3099594024

METHOD BLANK: 3127328

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	57.8	%	29 - 112
Fluoranthene-d10 (S)	92.1	%	45 - 130

LABORATORY CONTROL SAMPLE: 3127329

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	38.6	ug/L	1	0.39	22 - 75
2-Methylnapthalene-d10 (S)	57.7	%			29 - 112
Fluoranthene-d10 (S)	87.6	%			45 - 130

MATRIX SPIKE: 3127330 DUPLICATE: 3127331 ORIGINAL: 3099594015

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.02848	ug/L	1.1	.3672	.4654	30.5	37.6	22 - 75	23.6	30
2-Methylnapthalene-d10 (S)	49.8	%				49.8	57.5	29 - 112		
Fluoranthene-d10 (S)	77.5	%				77.5	81.8	45 - 130		

MATRIX SPIKE: 3127332 DUPLICATE: 3127333 ORIGINAL: 3099594024

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.02773	ug/L	1.1	.48184	.42235	42.7	35.5	22 - 75	13.2	30
2-Methylnapthalene-d10 (S)	68	%				68	56.7	29 - 112		
Fluoranthene-d10 (S)	83.5	%				83.5	77.4	45 - 130		

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

QC Batch: EXTR/60290 **Analysis Method:** EPA 680

QC Batch Method: EPA 680

Associated Lab Samples: 3099594001, 3099594002, 3099594004, 3099594005, 3099594007, 3099594009, 3099594010, 3099594012, 3099594013, 3099594015

METHOD BLANK: 3127457

Parameter	Blank Result	Units	Reporting Limit
Decachlorobiphenyl	ND	ug/L	0.050
Dichlorobiphenyls	ND	ug/L	0.010
Heptachlorobiphenyls	ND	ug/L	0.030
Hexachlorobiphenyls	ND	ug/L	0.020
Monochlorobiphenyls	ND	ug/L	0.010
Nonachlorobiphenyls	ND	ug/L	0.040
Octachlorobiphenyls	ND	ug/L	0.030
Pentachlorobiphenyls	ND	ug/L	0.020
Tetrachlorobiphenyls	ND	ug/L	0.020
Trichlorobiphenyls	ND	ug/L	0.010
2-Fluorobiphenyl (S)	88.4	%	52 - 118
Terphenyl-d14 (S)	103	%	46 - 133
Tetrachloro-m-xylene (S)	64.8	%	30 - 133

LABORATORY CONTROL SAMPLE: 3127458

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Decachlorobiphenyl	103	ug/L	2.5	2.6	40 - 140
Dichlorobiphenyls	98.5	ug/L	.5	0.49	40 - 140
Heptachlorobiphenyls	101	ug/L	1.5	1.5	40 - 140
Hexachlorobiphenyls	104	ug/L	1	1.0	40 - 140
Monochlorobiphenyls	82.1	ug/L	.5	0.41	40 - 140
Nonachlorobiphenyls	91.6	ug/L	2	1.8	40 - 140
Octachlorobiphenyls	98.6	ug/L	1.5	1.5	40 - 140
Pentachlorobiphenyls	98.1	ug/L	1	0.98	40 - 140
Tetrachlorobiphenyls	86.4	ug/L	1	0.86	40 - 140
Trichlorobiphenyls	86.6	ug/L	.5	0.43	40 - 140
2-Fluorobiphenyl (S)	84.6	%			52 - 118
Terphenyl-d14 (S)	93.8	%			46 - 133
Tetrachloro-m-xylene (S)	62.4	%			30 - 133

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

MATRIX SPIKE: 3127459 DUPLICATE: 3127460 ORIGINAL: 3099594015

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Decachlorobiphenyl	0	ug/L	2.3	2.18206	2.46619	93.8	99.6	40 - 140	12.2	30
Dichlorobiphenyls	0	ug/L	.47	.40225	.44821	86.5	90.5	40 - 140	10.8	30
Heptachlorobiphenyls	0	ug/L	1.4	1.29937	1.44907	93.1	97.6	40 - 140	10.9	30
Hexachlorobiphenyls	0	ug/L	.93	.89589	.99537	96.3	101	40 - 140	10.5	30
Monochlorobiphenyls	0	ug/L	.47	.33246	.3756	71.5	75.9	40 - 140	12.2	30
Nonachlorobiphenyls	0	ug/L	1.9	1.55296	1.76931	83.5	89.4	40 - 140	13	30
Octachlorobiphenyls	0	ug/L	1.4	1.27229	1.41799	91.2	95.5	40 - 140	10.8	30
Pentachlorobiphenyls	0	ug/L	.93	.83549	.93252	89.8	94.2	40 - 140	11	30
Tetrachlorobiphenyls	0	ug/L	.93	.73755	.76909	79.3	77.7	40 - 140	4.19	30
Trichlorobiphenyls	0	ug/L	.47	.3657	.4022	78.6	81.2	40 - 140	9.51	30
2-Fluorobiphenyl (S)	73.8	%				73.8	78.9	52 - 118		
Terphenyl-d14 (S)	84	%				84	89.9	46 - 133		
Tetrachloro-m-xylene (S)	46	%				46	55.7	30 - 133		

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

QC Batch: EXTR/60311 **Analysis Method:** EPA 680

QC Batch Method: EPA 680

Associated Lab Samples: 3099594003, 3099594008, 3099594011, 3099594016, 3099594017, 3099594018, 3099594019, 3099594022, 3099594024

METHOD BLANK: 3128378

Parameter	Blank Result	Units	Reporting Limit
Decachlorobiphenyl	ND	ug/L	0.050
Dichlorobiphenyls	ND	ug/L	0.010
Heptachlorobiphenyls	ND	ug/L	0.030
Hexachlorobiphenyls	ND	ug/L	0.020
Monochlorobiphenyls	ND	ug/L	0.010
Nonachlorobiphenyls	ND	ug/L	0.040
Octachlorobiphenyls	ND	ug/L	0.030
Pentachlorobiphenyls	ND	ug/L	0.020
Tetrachlorobiphenyls	ND	ug/L	0.020
Trichlorobiphenyls	ND	ug/L	0.010
2-Fluorobiphenyl (S)	86.7	%	52 - 118
Terphenyl-d14 (S)	99.9	%	46 - 133
Tetrachloro-m-xylene (S)	63.2	%	30 - 133

LABORATORY CONTROL SAMPLE: 3128379

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Decachlorobiphenyl	106	ug/L	2.5	2.7	40 - 140
Dichlorobiphenyls	96.2	ug/L	.5	0.48	40 - 140
Heptachlorobiphenyls	99.6	ug/L	1.5	1.5	40 - 140
Hexachlorobiphenyls	103	ug/L	1	1.0	40 - 140
Monochlorobiphenyls	79.6	ug/L	.5	0.40	40 - 140
Nonachlorobiphenyls	92.4	ug/L	2	1.8	40 - 140
Octachlorobiphenyls	98.6	ug/L	1.5	1.5	40 - 140
Pentachlorobiphenyls	98.3	ug/L	1	0.98	40 - 140
Tetrachlorobiphenyls	84.8	ug/L	1	0.85	40 - 140
Trichlorobiphenyls	85.8	ug/L	.5	0.43	40 - 140
2-Fluorobiphenyl (S)	82.3	%			52 - 118
Terphenyl-d14 (S)	95.2	%			46 - 133
Tetrachloro-m-xylene (S)	59.7	%			30 - 133

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

MATRIX SPIKE: 3128380 DUPLICATE: 3128381 ORIGINAL: 3099594024

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Decachlorobiphenyl	0	ug/L	2.5	2.25717	3.04515	90.7	102	40 - 140	29.7	30
Dichlorobiphenyls	0	ug/L	.5	.48086	.60291	96.7	101	40 - 140	22.5	30
Heptachlorobiphenyls	0	ug/L	1.5	1.34905	1.77786	90.4	99.6	40 - 140	27.4	30
Hexachlorobiphenyls	0	ug/L	1	.94065	1.20772	94.5	101	40 - 140	24.9	30
Monochlorobiphenyls	0	ug/L	.5	.41171	.53207	82.8	89.4	40 - 140	25.5	30
Nonachlorobiphenyls	0	ug/L	2	1.60396	2.1174	80.6	88.9	40 - 140	27.6	30
Octachlorobiphenyls	0	ug/L	1.5	1.30442	1.74438	87.4	97.7	40 - 140	28.9	30
Pentachlorobiphenyls	0	ug/L	1	.87881	1.13843	88.3	95.6	40 - 140	25.7	30
Tetrachlorobiphenyls	0	ug/L	1	.8351	1.04342	83.9	87.6	40 - 140	22.2	30
Trichlorobiphenyls	0	ug/L	.5	.40712	.51191	81.8	86	40 - 140	22.8	30
2-Fluorobiphenyl (S)	78.3	%				78.3	94.8	52 - 118		
Terphenyl-d14 (S)	84.7	%				84.7	97.7	46 - 133		
Tetrachloro-m-xylene (S)	63.3	%				63.3	75.5	30 - 133		

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

QC Batch: VOMS/54873 **Analysis Method:** SW846 8260C

QC Batch Method: SW846 8260C

Associated Lab Samples: 3099594001, 3099594002, 3099594003, 3099594006

METHOD BLANK: 3127584

Parameter	Blank Result	Units	Reporting Limit
Acetone	ND	ug/L	10.0
tert-Amyl methyl ether	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
tert-Butyl Alcohol	ND	ug/L	10.0
n-Butylbenzene	ND	ug/L	2.0
tert-Butylbenzene	ND	ug/L	2.0
sec-Butylbenzene	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

1,3-Dichloropropane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
2-Hexanone	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
1,2-Dichloroethane-d4 (S)	110	%	62 - 133
4-Bromofluorobenzene (S)	99.1	%	79 - 114
Dibromofluoromethane (S)	95	%	78 - 116
Toluene-d8 (S)	93.4	%	76 - 127

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

LABORATORY CONTROL SAMPLE: 3127585

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Acetone	98.2	ug/L	100	98.2	40 - 151
tert-Amyl methyl ether	106	ug/L	20	21.2	75 - 121
Benzene	111	ug/L	20	22.1	80 - 124
Bromobenzene	104	ug/L	20	20.8	81 - 119
Bromochloromethane	97.6	ug/L	20	19.5	73 - 117
Bromodichloromethane	107	ug/L	20	21.5	79 - 126
Bromoform	95.8	ug/L	20	19.2	70 - 123
Bromomethane	90.1	ug/L	20	18.0	45 - 148
2-Butanone	102	ug/L	100	102	50 - 152
tert-Butyl Alcohol	96.2	ug/L	100	96.2	17 - 168
n-Butylbenzene	111	ug/L	20	22.2	71 - 130
tert-Butylbenzene	108	ug/L	20	21.6	72 - 124
sec-Butylbenzene	116	ug/L	20	23.1	72 - 127
Carbon Disulfide	103	ug/L	20	20.5	57 - 131
Carbon Tetrachloride	108	ug/L	20	21.5	62 - 132
Chlorobenzene	99.6	ug/L	20	19.9	85 - 117
Chlorodibromomethane	97.3	ug/L	20	19.5	77 - 122
Chloroethane	107	ug/L	20	21.4	51 - 142
2-Chloroethylvinyl ether	101	ug/L	20	20.2	1 - 150
Chloroform	109	ug/L	20	21.7	78 - 122
Chloromethane	99	ug/L	20	19.8	38 - 156
o-Chlorotoluene	113	ug/L	20	22.7	78 - 126
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
Cyclohexane	109	ug/L	20	21.8	66 - 130
1,2-Dibromo-3-chloropropane	101	ug/L	20	20.2	59 - 133
1,2-Dibromoethane	98.9	ug/L	20	19.8	80 - 124
Dibromomethane	103	ug/L	20	20.7	81 - 125
1,2-Dichlorobenzene	101	ug/L	20	20.2	82 - 118
1,3-Dichlorobenzene	103	ug/L	20	20.6	81 - 118
1,4-Dichlorobenzene	102	ug/L	20	20.5	81 - 116
Dichlorodifluoromethane	99.8	ug/L	20	20.0	17 - 166
1,1-Dichloroethane	114	ug/L	20	22.8	78 - 124
1,2-Dichloroethane	110	ug/L	20	22.0	70 - 133
1,1-Dichloroethene	120	ug/L	20	24.0	63 - 128
1,2-Dichloroethene, Total	115	ug/L	40	46.0	78 - 125
cis-1,2-Dichloroethene	111	ug/L	20	22.2	78 - 125
trans-1,2-Dichloroethene	119	ug/L	20	23.7	71 - 122
1,3-Dichloropropane	103	ug/L	20	20.6	82 - 126
2,2-Dichloropropane	108	ug/L	20	21.6	64 - 129
1,2-Dichloropropane	110	ug/L	20	22.0	81 - 127
cis-1,3-Dichloropropene	103	ug/L	20	20.5	81 - 121
trans-1,3-Dichloropropene	106	ug/L	20	21.2	78 - 126

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

1,3-Dichloropropene, Total	104	ug/L	40	41.8	80 - 123
Diisopropyl ether	117	ug/L	20	23.4	74 - 131
Ethyl tert-butyl ether	110	ug/L	20	22.0	75 - 123
Ethylbenzene	104	ug/L	20	20.7	80 - 124
Freon 113	104	ug/L	20	20.7	50 - 130
Hexachlorobutadiene	102	ug/L	20	20.4	55 - 128
2-Hexanone	118	ug/L	100	118	65 - 154
Isopropylbenzene	113	ug/L	20	22.7	73 - 129
p-Isopropyltoluene	113	ug/L	20	22.7	72 - 123
Methyl acetate	100	ug/L	20	20.0	70 - 130
Methyl cyclohexane	105	ug/L	20	21.0	70 - 130
Methyl t-Butyl Ether	104	ug/L	20	20.9	69 - 115
4-Methyl-2-Pentanone(MIBK)	117	ug/L	100	117	71 - 146
Methylene Chloride	109	ug/L	20	21.7	76 - 121
Naphthalene	83.2	ug/L	20	16.6	56 - 134
n-Propylbenzene	112	ug/L	20	22.4	74 - 122
Styrene	112	ug/L	20	22.4	79 - 123
1,1,1,2-Tetrachloroethane	98.5	ug/L	20	19.7	78 - 121
1,1,2,2-Tetrachloroethane	109	ug/L	20	21.9	74 - 135
Tetrachloroethene	99.9	ug/L	20	20.0	72 - 124
Toluene	104	ug/L	20	20.8	80 - 125
Total Xylenes	103	ug/L	60	61.6	79 - 125
1,2,3-Trichlorobenzene	85.7	ug/L	20	17.1	61 - 126
1,2,4-Trichlorobenzene	86.4	ug/L	20	17.3	67 - 123
1,1,1-Trichloroethane	107	ug/L	20	21.3	66 - 130
1,1,2-Trichloroethane	104	ug/L	20	20.7	82 - 126
Trichloroethene	107	ug/L	20	21.3	77 - 124
Trichlorofluoromethane	109	ug/L	20	21.7	38 - 123
1,2,3-Trichloropropane	113	ug/L	20	22.6	75 - 132
1,2,4-Trimethylbenzene	112	ug/L	20	22.5	76 - 125
Vinyl Acetate	108	ug/L	20	21.5	58 - 136
Vinyl Chloride	113	ug/L	20	22.5	27 - 138
o-Xylene	101	ug/L	20	20.2	79 - 124
mp-Xylene	103	ug/L	40	41.4	79 - 125
1,2-Dichloroethane-d4 (S)	106	%			62 - 133
4-Bromofluorobenzene (S)	98.1	%			79 - 114
Dibromofluoromethane (S)	96.9	%			78 - 116
Toluene-d8 (S)	93.7	%			76 - 127

MATRIX SPIKE: 3127657 DUPLICATE: 3127658 ORIGINAL: 3099594001

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

Acetone	10.4562	ug/L	100	124.206	125.574	114	115	40 - 151	1.1	40
tert-Amyl methyl ether	0	ug/L	20	21.7124	20.8995	109	104	75 - 121	3.82	40
Benzene	0	ug/L	20	23.8661	22.4261	119	112	80 - 124	6.22	26
Bromobenzene	0	ug/L	20	20.944	20.312	105	102	81 - 119	3.06	17
Bromochloromethane	0	ug/L	20	20.3522	19.8679	102	99.3	73 - 117	2.41	19
Bromodichloromethane	0	ug/L	20	22.3245	21.2368	112	106	79 - 126	4.99	16
Bromoform	0	ug/L	20	19.1817	19.0562	95.9	95.3	70 - 123	.66	16
Bromomethane	0	ug/L	20	19.9232	18.8283	99.6	94.1	45 - 148	5.65	26
2-Butanone	0	ug/L	100	98.1472	97.6889	98.1	97.7	50 - 152	.47	16
tert-Butyl Alcohol	0	ug/L	100	92.9117	93.0853	92.9	93.1	17 - 168	.19	40
n-Butylbenzene	0	ug/L	20	20.4899	20.2968	102	101	71 - 130	.95	20
tert-Butylbenzene	0	ug/L	20	21.1071	21.1182	106	106	72 - 124	.05	17
sec-Butylbenzene	0	ug/L	20	22.4193	22.5119	112	113	72 - 127	.41	17
Carbon Disulfide	0	ug/L	20	23.1278	21.1124	116	106	57 - 131	9.11	28
Carbon Tetrachloride	0	ug/L	20	23.6831	22.0531	118	110	62 - 132	7.13	17
Chlorobenzene	0	ug/L	20	20.647	19.2514	103	96.3	85 - 117	7	15
Chlorodibromomethane	0	ug/L	20	19.4653	18.5861	97.3	92.9	77 - 122	4.62	15
Chloroethane	0	ug/L	20	27.1097	24.3783	136	122	51 - 142	10.6	24
2-Chloroethylvinyl ether	0	ug/L	20	0	0	0*	0*	1 - 150	NC	40
Chloroform	0	ug/L	20	23.314	22.3691	117	112	78 - 122	4.14	16
Chloromethane	0	ug/L	20	22.1824	20.97	111	105	38 - 156	5.62	27
o-Chlorotoluene	0	ug/L	20	23.3478	22.6248	117	113	78 - 126	3.15	17
p-Chlorotoluene	0	ug/L	20	23.289	22.4185	116	112	78 - 125	3.81	16
Cyclohexane	0	ug/L	20	23.4213	22.2817	117	111	66 - 130	4.99	20
1,2-Dibromo-3-chloropropane	0	ug/L	20	20.1706	20.324	101	102	59 - 133	.76	26
1,2-Dibromoethane	0	ug/L	20	19.9986	19.409	100	97	80 - 124	2.99	19
Dibromomethane	0	ug/L	20	21.2711	20.7536	106	104	81 - 125	2.46	16
1,2-Dichlorobenzene	0	ug/L	20	19.8481	19.7657	99.2	98.8	82 - 118	.42	15
1,3-Dichlorobenzene	0	ug/L	20	20.3111	19.8869	102	99.4	81 - 118	2.11	16
1,4-Dichlorobenzene	0	ug/L	20	20.3018	20.0129	102	100	81 - 116	1.43	15
Dichlorodifluoromethane	0	ug/L	20	22.716	20.7154	114	104	17 - 166	9.21	24
1,1-Dichloroethane	0	ug/L	20	24.7819	23.5492	124	118	78 - 124	5.1	15
1,2-Dichloroethane	0	ug/L	20	23.5546	22.5346	118	113	70 - 133	4.43	19
1,1-Dichloroethene	0	ug/L	20	26.9084	24.9503	135*	125	63 - 128	7.55	21
1,2-Dichloroethene, Total	0	ug/L	40	49.6875	46.7966	124	117	78 - 125	5.99	40
cis-1,2-Dichloroethene	0	ug/L	20	23.9094	22.7511	120	114	78 - 125	4.96	21
trans-1,2-Dichloroethene	0	ug/L	20	25.7781	24.0455	129*	120	71 - 122	6.95	22
1,3-Dichloropropane	0	ug/L	20	21.0415	20.2209	105	101	82 - 126	3.98	15
2,2-Dichloropropane	0	ug/L	20	21.6238	20.191	108	101	64 - 129	6.85	18
1,2-Dichloropropane	0	ug/L	20	23.3524	22.1478	117	111	81 - 127	5.29	15
cis-1,3-Dichloropropene	0	ug/L	20	20.4842	19.3498	102	96.7	81 - 121	5.7	16
trans-1,3-Dichloropropene	0	ug/L	20	21.6288	20.5552	108	103	78 - 126	5.09	18
1,3-Dichloropropene, Total	0	ug/L	40	42.113	39.9051	105	99.8	80 - 123	5.38	16
Diisopropyl ether	0	ug/L	20	24.3139	23.4579	122	117	74 - 131	3.58	15
Ethyl tert-butyl ether	0	ug/L	20	22.8031	21.9462	114	110	75 - 123	3.83	16
Ethylbenzene	0	ug/L	20	21.6707	20.0567	108	100	80 - 124	7.74	19

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

Freon 113	0	ug/L	20	22.6715	20.831	113	104	50 - 130	8.46	26
Hexachlorobutadiene	0	ug/L	20	15.8338	14.9752	79.2	74.9	55 - 128	5.57	35
2-Hexanone	0	ug/L	100	117.867	119.364	118	119	65 - 154	1.26	17
Isopropylbenzene	0	ug/L	20	23.2446	22.8047	116	114	73 - 129	1.91	18
p-Isopropyltoluene	0	ug/L	20	21.8267	21.8991	109	109	72 - 123	.33	17
Methyl acetate	0	ug/L	20	19.8994	19.0006	99.5	95	70 - 130	4.62	18
Methyl cyclohexane	0	ug/L	20	21.2585	20.94	106	105	70 - 130	1.51	18
Methyl t-Butyl Ether	0	ug/L	20	21.5324	20.9521	108	105	69 - 115	2.73	20
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	119.094	118.312	119	118	71 - 146	.66	16
Methylene Chloride	0	ug/L	20	22.7442	21.744	114	109	76 - 121	4.5	17
Naphthalene	0	ug/L	20	15.1886	16.2522	75.9	81.3	56 - 134	6.77	40
n-Propylbenzene	0	ug/L	20	22.5826	22.3743	113	112	74 - 122	.93	20
Styrene	0	ug/L	20	23.0947	22.0952	115	110	79 - 123	4.42	16
1,1,1,2-Tetrachloroethane	0	ug/L	20	20.0292	18.9005	100	94.5	78 - 121	5.8	16
1,1,2,2-Tetrachloroethane	0	ug/L	20	22.4415	22.111	112	111	74 - 135	1.48	16
Tetrachloroethene	0	ug/L	20	20.579	18.9472	103	94.7	72 - 124	8.26	38
Toluene	0	ug/L	20	22.1915	20.7468	111	104	80 - 125	6.73	20
Total Xylenes	0	ug/L	60	64.0225	59.57	107	99.3	79 - 125	7.21	35
1,2,3-Trichlorobenzene	0	ug/L	20	14.6431	15.8139	73.2	79.1	61 - 126	7.69	36
1,2,4-Trichlorobenzene	0	ug/L	20	15.1911	15.8487	76	79.2	67 - 123	4.24	22
1,1,1-Trichloroethane	0	ug/L	20	23.4204	21.774	117	109	66 - 130	7.29	20
1,1,2-Trichloroethane	0	ug/L	20	21.2188	20.0617	106	100	82 - 126	5.61	15
Trichloroethene	0	ug/L	20	23.3905	21.92	117	110	77 - 124	6.49	18
Trichlorofluoromethane	0	ug/L	20	26.1719	23.8717	131*	119	38 - 123	9.19	23
1,2,3-Trichloropropane	0	ug/L	20	22.572	22.2642	113	111	75 - 132	1.37	19
1,2,4-Trimethylbenzene	0	ug/L	20	22.5059	22.0906	113	110	76 - 125	1.86	24
Vinyl Acetate	0	ug/L	20	17.9228	17.0122	89.6	85.1	58 - 136	5.21	17
Vinyl Chloride	0	ug/L	20	26.6913	24.2242	133	121	27 - 138	9.69	40
o-Xylene	0	ug/L	20	20.686	19.4131	103	97.1	79 - 124	6.35	19
mp-Xylene	0	ug/L	40	43.3365	40.1569	108	100	79 - 125	7.62	21
1,2-Dichloroethane-d4 (S)	108	%				108	108	62 - 133		
4-Bromofluorobenzene (S)	94.8	%				94.8	95.9	79 - 114		
Dibromofluoromethane (S)	95.2	%				95.2	95.4	78 - 116		
Toluene-d8 (S)	93	%				93	92.9	76 - 127		

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

QC Batch: VOMS/54908 **Analysis Method:** SW846 8260C

QC Batch Method: SW846 8260C

Associated Lab Samples: 3099594004, 3099594005, 3099594007, 3099594008, 3099594009, 3099594010, 3099594011, 3099594012, 3099594013, 3099594014, 3099594015, 3099594016, 3099594017, 3099594018, 3099594019, 3099594020, 3099594021, 3099594022, 3099594023

METHOD BLANK: 3128856

Parameter	Blank Result	Units	Reporting Limit
Acetone	ND	ug/L	10.0
tert-Amyl methyl ether	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
tert-Butyl Alcohol	ND	ug/L	10.0
n-Butylbenzene	ND	ug/L	2.0
tert-Butylbenzene	ND	ug/L	2.0
sec-Butylbenzene	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
cis-1,2-Dichloroethene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

trans-1,2-Dichloroethene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
2-Hexanone	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
1,2-Dichloroethane-d4 (S)	99.2	%	62 - 133
4-Bromofluorobenzene (S)	101	%	79 - 114
Dibromofluoromethane (S)	91.6	%	78 - 116
Toluene-d8 (S)	94.9	%	76 - 127

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

LABORATORY CONTROL SAMPLE: 3128857

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Acetone	92.5	ug/L	100	92.5	40 - 151
tert-Amyl methyl ether	94.2	ug/L	20	18.8	75 - 121
Benzene	111	ug/L	20	22.2	80 - 124
Bromobenzene	106	ug/L	20	21.2	81 - 119
Bromochloromethane	107	ug/L	20	21.3	73 - 117
Bromodichloromethane	91.3	ug/L	20	18.3	79 - 126
Bromoform	82.3	ug/L	20	16.5	70 - 123
Bromomethane	82.7	ug/L	20	16.5	45 - 148
2-Butanone	88.3	ug/L	100	88.3	50 - 152
tert-Butyl Alcohol	64.3	ug/L	100	64.3	17 - 168
n-Butylbenzene	98.3	ug/L	20	19.7	71 - 130
tert-Butylbenzene	94.6	ug/L	20	18.9	72 - 124
sec-Butylbenzene	95.8	ug/L	20	19.2	72 - 127
Carbon Disulfide	111	ug/L	20	22.1	57 - 131
Carbon Tetrachloride	108	ug/L	20	21.7	62 - 132
Chlorobenzene	102	ug/L	20	20.4	85 - 117
Chlorodibromomethane	92.5	ug/L	20	18.5	77 - 122
Chloroethane	80.1	ug/L	20	16.0	51 - 142
2-Chloroethylvinyl ether	90	ug/L	20	18.0	1 - 150
Chloroform	106	ug/L	20	21.2	78 - 122
Chloromethane	84.8	ug/L	20	17.0	38 - 156
o-Chlorotoluene	106	ug/L	20	21.3	78 - 126
p-Chlorotoluene	106	ug/L	20	21.2	78 - 125
Cyclohexane	104	ug/L	20	20.7	66 - 130
1,2-Dibromo-3-chloropropane	87.2	ug/L	20	17.4	59 - 133
1,2-Dibromoethane	94.5	ug/L	20	18.9	80 - 124
Dibromomethane	102	ug/L	20	20.5	81 - 125
1,2-Dichlorobenzene	103	ug/L	20	20.5	82 - 118
1,3-Dichlorobenzene	102	ug/L	20	20.3	81 - 118
1,4-Dichlorobenzene	105	ug/L	20	20.9	81 - 116
Dichlorodifluoromethane	81	ug/L	20	16.2	17 - 166
1,1-Dichloroethane	104	ug/L	20	20.8	78 - 124
1,2-Dichloroethane	105	ug/L	20	21.0	70 - 133
1,1-Dichloroethene	116	ug/L	20	23.1	63 - 128
1,2-Dichloroethene, Total	110	ug/L	40	44.1	78 - 125
cis-1,2-Dichloroethene	109	ug/L	20	21.7	78 - 125
trans-1,2-Dichloroethene	112	ug/L	20	22.4	71 - 122
1,3-Dichloropropane	92.2	ug/L	20	18.4	82 - 126
2,2-Dichloropropane	107	ug/L	20	21.5	64 - 129
1,2-Dichloropropane	103	ug/L	20	20.6	81 - 127
cis-1,3-Dichloropropene	94.1	ug/L	20	18.8	81 - 121
trans-1,3-Dichloropropene	95.2	ug/L	20	19.0	78 - 126

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

1,3-Dichloropropene, Total	94.6	ug/L	40	37.9	80 - 123
Diisopropyl ether	103	ug/L	20	20.6	74 - 131
Ethyl tert-butyl ether	102	ug/L	20	20.3	75 - 123
Ethylbenzene	95	ug/L	20	19.0	80 - 124
Freon 113	109	ug/L	20	21.8	50 - 130
Hexachlorobutadiene	111	ug/L	20	22.3	55 - 128
2-Hexanone	90	ug/L	100	90.0	65 - 154
Isopropylbenzene	96	ug/L	20	19.2	73 - 129
p-Isopropyltoluene	99.9	ug/L	20	20.0	72 - 123
Methyl acetate	99.6	ug/L	20	19.9	70 - 130
Methyl cyclohexane	102	ug/L	20	20.3	70 - 130
Methyl t-Butyl Ether	92.2	ug/L	20	18.4	69 - 115
4-Methyl-2-Pentanone(MIBK)	88.2	ug/L	100	88.2	71 - 146
Methylene Chloride	99.9	ug/L	20	20.0	76 - 121
Naphthalene	84.4	ug/L	20	16.9	56 - 134
n-Propylbenzene	97.3	ug/L	20	19.5	74 - 122
Styrene	96.6	ug/L	20	19.3	79 - 123
1,1,1,2-Tetrachloroethane	95.3	ug/L	20	19.1	78 - 121
1,1,2,2-Tetrachloroethane	95.4	ug/L	20	19.1	74 - 135
Tetrachloroethene	104	ug/L	20	20.8	72 - 124
Toluene	104	ug/L	20	20.8	80 - 125
Total Xylenes	96.2	ug/L	60	57.7	79 - 125
1,2,3-Trichlorobenzene	91.7	ug/L	20	18.3	61 - 126
1,2,4-Trichlorobenzene	96	ug/L	20	19.2	67 - 123
1,1,1-Trichloroethane	104	ug/L	20	20.7	66 - 130
1,1,2-Trichloroethane	91.6	ug/L	20	18.3	82 - 126
Trichloroethene	108	ug/L	20	21.5	77 - 124
Trichlorofluoromethane	85.7	ug/L	20	17.1	38 - 123
1,2,3-Trichloropropane	101	ug/L	20	20.3	75 - 132
1,2,4-Trimethylbenzene	96	ug/L	20	19.2	76 - 125
Vinyl Acetate	95.4	ug/L	20	19.1	58 - 136
Vinyl Chloride	82.1	ug/L	20	16.4	27 - 138
o-Xylene	95.3	ug/L	20	19.1	79 - 124
mp-Xylene	96.7	ug/L	40	38.7	79 - 125
1,2-Dichloroethane-d4 (S)	93.9	%			62 - 133
4-Bromofluorobenzene (S)	102	%			79 - 114
Dibromofluoromethane (S)	92.6	%			78 - 116
Toluene-d8 (S)	94.8	%			76 - 127

MATRIX SPIKE: 3128929 DUPLICATE: 3128930 ORIGINAL: 3099594015

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

Acetone	21.954	ug/L	100	129.548	139.092	108	117	40 - 151	7.11	40
tert-Amyl methyl ether	0	ug/L	20	20.2392	19.3357	101	96.7	75 - 121	4.57	40
Benzene	0	ug/L	20	24.7564	23.5109	124	118	80 - 124	5.16	26
Bromobenzene	0	ug/L	20	21.7287	21.0476	109	105	81 - 119	3.18	17
Bromochloromethane	0	ug/L	20	20.7355	21.7848	104	109	73 - 117	4.94	19
Bromodichloromethane	0	ug/L	20	19.7941	18.9752	99	94.9	79 - 126	4.22	16
Bromoform	0	ug/L	20	19.2792	17.4595	96.4	87.3	70 - 123	9.91	16
Bromomethane	0	ug/L	20	6.8485	8.2541	34.2*	41.3*	45 - 148	18.6	26
2-Butanone	0	ug/L	100	108.713	109.058	109	109	50 - 152	.32	16
tert-Butyl Alcohol	2.21728	ug/L	100	134.73	137.735	133	136	17 - 168	2.21	40
n-Butylbenzene	0	ug/L	20	18.3372	18.9141	91.7	94.6	71 - 130	3.1	20
tert-Butylbenzene	0	ug/L	20	19.5154	19.4463	97.6	97.2	72 - 124	.35	17
sec-Butylbenzene	0	ug/L	20	19.4522	19.7587	97.3	98.8	72 - 127	1.56	17
Carbon Disulfide	0	ug/L	20	22.5684	22.7856	113	114	57 - 131	.96	28
Carbon Tetrachloride	0	ug/L	20	23.5098	22.4569	118	112	62 - 132	4.58	17
Chlorobenzene	0	ug/L	20	21.049	20.1774	105	101	85 - 117	4.23	15
Chlorodibromomethane	0	ug/L	20	19.3832	18.146	96.9	90.7	77 - 122	6.59	15
Chloroethane	0	ug/L	20	15.1074	14.1932	75.5	71	51 - 142	6.24	24
2-Chloroethylvinyl ether	0	ug/L	20	0	0	0*	0*	1 - 150	NC	40
Chloroform	0	ug/L	20	22.7452	22.7994	114	114	78 - 122	.24	16
Chloromethane	0	ug/L	20	15.4811	17.0584	77.4	85.3	38 - 156	9.69	27
o-Chlorotoluene	0	ug/L	20	23.0078	22.297	115	111	78 - 126	3.14	17
p-Chlorotoluene	0	ug/L	20	22.4057	21.9721	112	110	78 - 125	1.95	16
Cyclohexane	0	ug/L	20	22.6456	21.9339	113	110	66 - 130	3.19	20
1,2-Dibromo-3-chloropropane	0	ug/L	20	19.2472	20.831	96.2	104	59 - 133	7.9	26
1,2-Dibromoethane	0	ug/L	20	19.2344	18.4019	96.2	92	80 - 124	4.42	19
Dibromomethane	0	ug/L	20	21.269	21.5048	106	108	81 - 125	1.1	16
1,2-Dichlorobenzene	0	ug/L	20	20.5352	20.5019	103	103	82 - 118	.16	15
1,3-Dichlorobenzene	0	ug/L	20	20.522	20.4923	103	102	81 - 118	.14	16
1,4-Dichlorobenzene	0	ug/L	20	20.7987	20.5829	104	103	81 - 116	1.04	15
Dichlorodifluoromethane	0	ug/L	20	13.8299	14.3425	69.1	71.7	17 - 166	3.64	24
1,1-Dichloroethane	0	ug/L	20	22.1546	22.4247	111	112	78 - 124	1.21	15
1,2-Dichloroethane	0	ug/L	20	23.0279	22.6977	115	113	70 - 133	1.44	19
1,1-Dichloroethene	0	ug/L	20	24.9877	25.1129	125	126	63 - 128	.5	21
1,2-Dichloroethene, Total	0	ug/L	40	47.8285	47.5778	120	119	78 - 125	.53	40
cis-1,2-Dichloroethene	0	ug/L	20	23.4395	23.553	117	118	78 - 125	.48	21
trans-1,2-Dichloroethene	0	ug/L	20	24.3889	24.0248	122	120	71 - 122	1.5	22
1,3-Dichloropropane	0	ug/L	20	19.6015	18.5011	98	92.5	82 - 126	5.78	15
2,2-Dichloropropane	0	ug/L	20	16.1519	18.5459	80.8	92.7	64 - 129	13.8	18
1,2-Dichloropropane	0	ug/L	20	22.6742	21.9093	113	110	81 - 127	3.43	15
cis-1,3-Dichloropropene	0	ug/L	20	18.436	17.3443	92.2	86.7	81 - 121	6.1	16
trans-1,3-Dichloropropene	0	ug/L	20	17.5252	16.8352	87.6	84.2	78 - 126	4.02	18
1,3-Dichloropropene, Total	0	ug/L	40	35.9612	34.1796	89.9	85.4	80 - 123	5.08	16
Diisopropyl ether	0	ug/L	20	22.9202	21.7772	115	109	74 - 131	5.11	15
Ethyl tert-butyl ether	0	ug/L	20	22.1607	21.0592	111	105	75 - 123	5.1	16
Ethylbenzene	0	ug/L	20	19.7513	19.2247	98.8	96.1	80 - 124	2.7	19

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

Freon 113	0	ug/L	20	23.149	22.3812	116	112	50 - 130	3.37	26
Hexachlorobutadiene	0	ug/L	20	20.5929	19.3112	103	96.6	55 - 128	6.42	35
2-Hexanone	0	ug/L	100	105.561	106.995	106	107	65 - 154	1.35	17
Isopropylbenzene	0	ug/L	20	20.5592	20.0629	103	100	73 - 129	2.44	18
p-Isopropyltoluene	0	ug/L	20	19.7113	19.9259	98.6	99.6	72 - 123	1.08	17
Methyl acetate	0	ug/L	20	18.6703	19.703	93.4	98.5	70 - 130	5.38	18
Methyl cyclohexane	0	ug/L	20	20.8617	20.3035	104	102	70 - 130	2.71	18
Methyl t-Butyl Ether	0	ug/L	20	19.7727	19.3283	98.9	96.6	69 - 115	2.27	20
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	105.399	102.325	105	102	71 - 146	2.96	16
Methylene Chloride	0	ug/L	20	19.0411	20.364	95.2	102	76 - 121	6.71	17
Naphthalene	0	ug/L	20	12.528	16.3691	62.6	81.8	56 - 134	26.6	40
n-Propylbenzene	0	ug/L	20	20.1964	19.9521	101	99.8	74 - 122	1.22	20
Styrene	0	ug/L	20	20.4986	19.0887	102	95.4	79 - 123	7.12	16
1,1,1,2-Tetrachloroethane	0	ug/L	20	19.2892	18.1679	96.4	90.8	78 - 121	5.99	16
1,1,2,2-Tetrachloroethane	0	ug/L	20	22.7641	21.4749	114	107	74 - 135	5.83	16
Tetrachloroethene	0	ug/L	20	21.6664	20.4509	108	102	72 - 124	5.77	38
Toluene	0	ug/L	20	22.0535	21.0046	110	105	80 - 125	4.87	20
Total Xylenes	0	ug/L	60	58.8157	58.0242	98	96.7	79 - 125	1.35	35
1,2,3-Trichlorobenzene	0	ug/L	20	13.986	17.4098	69.9	87	61 - 126	21.8	36
1,2,4-Trichlorobenzene	0	ug/L	20	14.9855	17.466	74.9	87.3	67 - 123	15.3	22
1,1,1-Trichloroethane	0	ug/L	20	23.0106	22.4219	115	112	66 - 130	2.59	20
1,1,2-Trichloroethane	0	ug/L	20	19.4755	18.4728	97.4	92.4	82 - 126	5.28	15
Trichloroethene	2.16528	ug/L	20	26.3938	24.7214	121	113	77 - 124	6.54	18
Trichlorofluoromethane	0	ug/L	20	19.9571	19.969	99.8	99.8	38 - 123	.06	23
1,2,3-Trichloropropane	0	ug/L	20	23.9093	21.8775	120	109	75 - 132	8.88	19
1,2,4-Trimethylbenzene	0	ug/L	20	20.0005	19.4796	100	97.4	76 - 125	2.64	24
Vinyl Acetate	0	ug/L	20	15.6155	14.8393	78.1	74.2	58 - 136	5.1	17
Vinyl Chloride	0	ug/L	20	17.439	17.8384	87.2	89.2	27 - 138	2.26	40
o-Xylene	0	ug/L	20	19.214	18.9034	96.1	94.5	79 - 124	1.63	19
mp-Xylene	0	ug/L	40	39.6017	39.1208	99	97.8	79 - 125	1.22	21
1,2-Dichloroethane-d4 (S)	101	%				101	104	62 - 133		
4-Bromofluorobenzene (S)	99.7	%				99.7	99.4	79 - 114		
Dibromofluoromethane (S)	90.3	%				90.3	93.7	78 - 116		
Toluene-d8 (S)	92.3	%				92.3	91.5	76 - 127		

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

QC Batch: VOMS/54917 **Analysis Method:** SW846 8260C

QC Batch Method: SW846 8260C

Associated Lab Samples: 3099594024

METHOD BLANK: 3129287

Parameter	Blank Result	Units	Reporting Limit
Acetone	ND	ug/L	10.0
tert-Amyl methyl ether	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
tert-Butyl Alcohol	ND	ug/L	10.0
n-Butylbenzene	ND	ug/L	2.0
tert-Butylbenzene	ND	ug/L	2.0
sec-Butylbenzene	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

1,3-Dichloropropane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
2-Hexanone	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Methylene Chloride	0.51J	ug/L	1.0
Naphthalene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
1,2-Dichloroethane-d4 (S)	104	%	62 - 133
4-Bromofluorobenzene (S)	104	%	79 - 114
Dibromofluoromethane (S)	94.4	%	78 - 116
Toluene-d8 (S)	93.2	%	76 - 127

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

LABORATORY CONTROL SAMPLE: 3129288

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Acetone	122	ug/L	100	122	40 - 151
tert-Amyl methyl ether	96	ug/L	20	19.2	75 - 121
Benzene	118	ug/L	20	23.6	80 - 124
Bromobenzene	102	ug/L	20	20.4	81 - 119
Bromochloromethane	107	ug/L	20	21.3	73 - 117
Bromodichloromethane	93.5	ug/L	20	18.7	79 - 126
Bromoform	79.9	ug/L	20	16.0	70 - 123
Bromomethane	61.3	ug/L	20	12.3	45 - 148
2-Butanone	111	ug/L	100	111	50 - 152
tert-Butyl Alcohol	128	ug/L	100	128	17 - 168
n-Butylbenzene	98.8	ug/L	20	19.8	71 - 130
tert-Butylbenzene	94.2	ug/L	20	18.8	72 - 124
sec-Butylbenzene	97.6	ug/L	20	19.5	72 - 127
Carbon Disulfide	121	ug/L	20	24.3	57 - 131
Carbon Tetrachloride	110	ug/L	20	22.1	62 - 132
Chlorobenzene	99.1	ug/L	20	19.8	85 - 117
Chlorodibromomethane	86.9	ug/L	20	17.4	77 - 122
Chloroethane	84.8	ug/L	20	17.0	51 - 142
2-Chloroethylvinyl ether	94.6	ug/L	20	18.9	1 - 150
Chloroform	112	ug/L	20	22.4	78 - 122
Chloromethane	95.4	ug/L	20	19.1	38 - 156
o-Chlorotoluene	109	ug/L	20	21.7	78 - 126
p-Chlorotoluene	107	ug/L	20	21.5	78 - 125
Cyclohexane	109	ug/L	20	21.7	66 - 130
1,2-Dibromo-3-chloropropane	98.8	ug/L	20	19.8	59 - 133
1,2-Dibromoethane	90.9	ug/L	20	18.2	80 - 124
Dibromomethane	104	ug/L	20	20.8	81 - 125
1,2-Dichlorobenzene	101	ug/L	20	20.1	82 - 118
1,3-Dichlorobenzene	101	ug/L	20	20.2	81 - 118
1,4-Dichlorobenzene	102	ug/L	20	20.4	81 - 116
Dichlorodifluoromethane	89.3	ug/L	20	17.9	17 - 166
1,1-Dichloroethane	110	ug/L	20	22.0	78 - 124
1,2-Dichloroethane	110	ug/L	20	22.0	70 - 133
1,1-Dichloroethene	127	ug/L	20	25.4	63 - 128
1,2-Dichloroethene, Total	117	ug/L	40	46.7	78 - 125
cis-1,2-Dichloroethene	113	ug/L	20	22.7	78 - 125
trans-1,2-Dichloroethene	120	ug/L	20	24.0	71 - 122
1,3-Dichloropropane	90.2	ug/L	20	18.0	82 - 126
2,2-Dichloropropane	113	ug/L	20	22.6	64 - 129
1,2-Dichloropropane	108	ug/L	20	21.7	81 - 127
cis-1,3-Dichloropropene	91.7	ug/L	20	18.3	81 - 121
trans-1,3-Dichloropropene	92.8	ug/L	20	18.6	78 - 126

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

1,3-Dichloropropene, Total	92.2	ug/L	40	36.9	80 - 123
Diisopropyl ether	109	ug/L	20	21.7	74 - 131
Ethyl tert-butyl ether	106	ug/L	20	21.2	75 - 123
Ethylbenzene	96.1	ug/L	20	19.2	80 - 124
Freon 113	112	ug/L	20	22.4	50 - 130
Hexachlorobutadiene	126	ug/L	20	25.1	55 - 128
2-Hexanone	103	ug/L	100	103	65 - 154
Isopropylbenzene	97.1	ug/L	20	19.4	73 - 129
p-Isopropyltoluene	100	ug/L	20	20.0	72 - 123
Methyl acetate	111	ug/L	20	22.2	70 - 130
Methyl cyclohexane	99	ug/L	20	19.8	70 - 130
Methyl t-Butyl Ether	95.1	ug/L	20	19.0	69 - 115
4-Methyl-2-Pentanone(MIBK)	98.3	ug/L	100	98.3	71 - 146
Methylene Chloride	106	ug/L	20	21.1	76 - 121
Naphthalene	86.6	ug/L	20	17.3	56 - 134
n-Propylbenzene	96.1	ug/L	20	19.2	74 - 122
Styrene	95.2	ug/L	20	19.0	79 - 123
1,1,1,2-Tetrachloroethane	89.5	ug/L	20	17.9	78 - 121
1,1,2,2-Tetrachloroethane	99.7	ug/L	20	19.9	74 - 135
Tetrachloroethene	102	ug/L	20	20.5	72 - 124
Toluene	105	ug/L	20	20.9	80 - 125
Total Xylenes	95.4	ug/L	60	57.2	79 - 125
1,2,3-Trichlorobenzene	93.1	ug/L	20	18.6	61 - 126
1,2,4-Trichlorobenzene	94.3	ug/L	20	18.9	67 - 123
1,1,1-Trichloroethane	109	ug/L	20	21.8	66 - 130
1,1,2-Trichloroethane	89.3	ug/L	20	17.9	82 - 126
Trichloroethene	113	ug/L	20	22.7	77 - 124
Trichlorofluoromethane	98.7	ug/L	20	19.7	38 - 123
1,2,3-Trichloropropane	106	ug/L	20	21.2	75 - 132
1,2,4-Trimethylbenzene	95.6	ug/L	20	19.1	76 - 125
Vinyl Acetate	96.4	ug/L	20	19.3	58 - 136
Vinyl Chloride	99.4	ug/L	20	19.9	27 - 138
o-Xylene	93.7	ug/L	20	18.7	79 - 124
mp-Xylene	96.3	ug/L	40	38.5	79 - 125
1,2-Dichloroethane-d4 (S)	99.9	%			62 - 133
4-Bromofluorobenzene (S)	98.3	%			79 - 114
Dibromofluoromethane (S)	93.6	%			78 - 116
Toluene-d8 (S)	91.9	%			76 - 127

MATRIX SPIKE: 3129302 DUPLICATE: 3129303 ORIGINAL: 3099594024

****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.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

Acetone	10.4536	ug/L	100	117.841	108.376	107	97.9	40 - 151	8.37	40
tert-Amyl methyl ether	0	ug/L	20	20.2331	20.6068	101	103	75 - 121	1.83	40
Benzene	0	ug/L	20	25.6993	25.7078	128*	129*	80 - 124	.03	26
Bromobenzene	0	ug/L	20	21.8187	21.7551	109	109	81 - 119	.29	17
Bromochloromethane	0	ug/L	20	22.8697	23.3251	114	117	73 - 117	1.97	19
Bromodichloromethane	0	ug/L	20	19.9662	20.4224	99.8	102	79 - 126	2.26	16
Bromoform	0	ug/L	20	16.2681	16.7847	81.3	83.9	70 - 123	3.13	16
Bromomethane	0	ug/L	20	12.7141	14.8139	63.6	74.1	45 - 148	15.3	26
2-Butanone	0	ug/L	100	94.6734	97.9084	94.7	97.9	50 - 152	3.36	16
tert-Butyl Alcohol	0	ug/L	100	71.8127	69.6551	71.8	69.7	17 - 168	3.05	40
n-Butylbenzene	0	ug/L	20	18.3871	18.632	91.9	93.2	71 - 130	1.32	20
tert-Butylbenzene	0	ug/L	20	19.2054	19.2352	96	96.2	72 - 124	.16	17
sec-Butylbenzene	0	ug/L	20	19.5463	19.6887	97.7	98.4	72 - 127	.73	17
Carbon Disulfide	0	ug/L	20	26.2975	26.1258	131	131	57 - 131	.66	28
Carbon Tetrachloride	0	ug/L	20	25.1618	24.2652	126	121	62 - 132	3.63	17
Chlorobenzene	0	ug/L	20	21.5802	21.757	108	109	85 - 117	.82	15
Chlorodibromomethane	0	ug/L	20	18.5891	19.1508	92.9	95.8	77 - 122	2.98	15
Chloroethane	0	ug/L	20	23.9814	22.9473	120	115	51 - 142	4.41	24
2-Chloroethylvinyl ether	0	ug/L	20	0	0	0*	0*	1 - 150	NC	40
Chloroform	0	ug/L	20	24.3986	24.231	122	121	78 - 122	.69	16
Chloromethane	0	ug/L	20	19.6629	19.5331	98.3	97.7	38 - 156	.66	27
o-Chlorotoluene	0	ug/L	20	22.9552	22.7897	115	114	78 - 126	.72	17
p-Chlorotoluene	0	ug/L	20	22.8008	22.7864	114	114	78 - 125	.06	16
Cyclohexane	0	ug/L	20	23.3743	23.643	117	118	66 - 130	1.14	20
1,2-Dibromo-3-chloropropane	0	ug/L	20	18.8135	19.8629	94.1	99.3	59 - 133	5.43	26
1,2-Dibromoethane	0	ug/L	20	19.0298	20.0696	95.1	100	80 - 124	5.32	19
Dibromomethane	0	ug/L	20	22.2384	22.6677	111	113	81 - 125	1.91	16
1,2-Dichlorobenzene	0	ug/L	20	20.3641	20.8107	102	104	82 - 118	2.17	15
1,3-Dichlorobenzene	0	ug/L	20	20.6928	20.8691	103	104	81 - 118	.85	16
1,4-Dichlorobenzene	0	ug/L	20	21.0578	21.056	105	105	81 - 116	.009	15
Dichlorodifluoromethane	0	ug/L	20	19.7127	19.2539	98.6	96.3	17 - 166	2.35	24
1,1-Dichloroethane	0	ug/L	20	24.0622	24.1873	120	121	78 - 124	.52	15
1,2-Dichloroethane	0	ug/L	20	23.6655	23.9632	118	120	70 - 133	1.25	19
1,1-Dichloroethene	0	ug/L	20	28.3673	28.1583	142*	141*	63 - 128	.74	21
1,2-Dichloroethene, Total	0	ug/L	40	50.9977	50.9692	127*	127*	78 - 125	.06	40
cis-1,2-Dichloroethene	0	ug/L	20	24.9131	24.6843	125	123	78 - 125	.92	21
trans-1,2-Dichloroethene	0	ug/L	20	26.0846	26.285	130*	131*	71 - 122	.77	22
1,3-Dichloropropane	0	ug/L	20	19.2172	19.9391	96.1	99.7	82 - 126	3.69	15
2,2-Dichloropropane	0	ug/L	20	21.0989	20.9808	105	105	64 - 129	.56	18
1,2-Dichloropropane	0	ug/L	20	23.3377	23.4146	117	117	81 - 127	.33	15
cis-1,3-Dichloropropene	0	ug/L	20	18.6092	19.0395	93	95.2	81 - 121	2.29	16
trans-1,3-Dichloropropene	0	ug/L	20	18.8473	19.4679	94.2	97.3	78 - 126	3.24	18
1,3-Dichloropropene, Total	0	ug/L	40	37.4564	38.5074	93.6	96.3	80 - 123	2.77	16
Diisopropyl ether	0	ug/L	20	23.152	23.511	116	118	74 - 131	1.54	15
Ethyl tert-butyl ether	0	ug/L	20	22.1592	22.4307	111	112	75 - 123	1.22	16
Ethylbenzene	0	ug/L	20	20.4158	20.6922	102	103	80 - 124	1.34	19

QUALITY CONTROL DATA

Workorder: 3099594 LM MRC 2020 April SWS

Freon 113	0	ug/L	20	25.1182	24.9043	126	125	50 - 130	.86	26
Hexachlorobutadiene	0	ug/L	20	17.9686	18.4155	89.8	92.1	55 - 128	2.46	35
2-Hexanone	0	ug/L	100	97.1001	102.996	97.1	103	65 - 154	5.89	17
Isopropylbenzene	0	ug/L	20	20.6368	20.5415	103	103	73 - 129	.46	18
p-Isopropyltoluene	0	ug/L	20	19.4899	19.8309	97.4	99.2	72 - 123	1.73	17
Methyl acetate	0	ug/L	20	18.125	19.0902	90.6	95.5	70 - 130	5.19	18
Methyl cyclohexane	0	ug/L	20	20.897	21.2642	104	106	70 - 130	1.74	18
Methyl t-Butyl Ether	0	ug/L	20	19.9849	20.5385	99.9	103	69 - 115	2.73	20
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	97.4185	103.246	97.4	103	71 - 146	5.81	16
Methylene Chloride	0	ug/L	20	22.7086	22.5568	114	113	76 - 121	.67	17
Naphthalene	0	ug/L	20	12.8946	14.3523	64.5	71.8	56 - 134	10.7	40
n-Propylbenzene	0	ug/L	20	20.3663	20.1933	102	101	74 - 122	.85	20
Styrene	0	ug/L	20	20.6266	20.6827	103	103	79 - 123	.27	16
1,1,1,2-Tetrachloroethane	0	ug/L	20	19.4164	19.3478	97.1	96.7	78 - 121	.35	16
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.6634	21.1375	103	106	74 - 135	2.27	16
Tetrachloroethene	0	ug/L	20	21.8224	21.9508	109	110	72 - 124	.59	38
Toluene	0	ug/L	20	22.6037	23.014	113	115	80 - 125	1.8	20
Total Xylenes	0	ug/L	60	60.8731	62.0869	101	103	79 - 125	1.97	35
1,2,3-Trichlorobenzene	0	ug/L	20	13.6372	14.7918	68.2	74	61 - 126	8.12	36
1,2,4-Trichlorobenzene	0	ug/L	20	14.9586	16.0144	74.8	80.1	67 - 123	6.82	22
1,1,1-Trichloroethane	0	ug/L	20	24.0285	24.1614	120	121	66 - 130	.55	20
1,1,2-Trichloroethane	0	ug/L	20	19.2521	19.7845	96.3	98.9	82 - 126	2.73	15
Trichloroethene	.77457	ug/L	20	25.4548	25.5712	123	124	77 - 124	.46	18
Trichlorofluoromethane	0	ug/L	20	23.5107	23.0804	118	115	38 - 123	1.85	23
1,2,3-Trichloropropane	0	ug/L	20	21.3428	21.8389	107	109	75 - 132	2.3	19
1,2,4-Trimethylbenzene	0	ug/L	20	19.9202	20.0362	99.6	100	76 - 125	.58	24
Vinyl Acetate	0	ug/L	20	15.8407	16.2951	79.2	81.5	58 - 136	2.83	17
Vinyl Chloride	0	ug/L	20	21.8261	21.4887	109	107	27 - 138	1.56	40
o-Xylene	0	ug/L	20	19.7669	20.1503	98.8	101	79 - 124	1.92	19
mp-Xylene	0	ug/L	40	41.1062	41.9365	103	105	79 - 125	2	21
1,2-Dichloroethane-d4 (S)	99.6	%				99.6	101	62 - 133		
4-Bromofluorobenzene (S)	98.5	%				98.5	96.5	79 - 114		
Dibromofluoromethane (S)	93.1	%				93.1	93.9	78 - 116		
Toluene-d8 (S)	91.5	%				91.5	93.2	76 - 127		

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3099594005	MRC-SW6B-S-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594012	MRC-SW6A-S-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594013	MRC-SW6A-S-DUP-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594014	MRC-SW17A-S-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594015	MRC-SW8A-S-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594020	MRC-SW1A-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594021	MRC-SW2A-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594023	MRC-SW1A-DUP-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594024	MRC-SW8B-S-20200428	SW846 3510C	EXTR/60288	8270 SIM	SVMS/35737
3099594001	MRC-SW7B-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594002	MRC-SW9B-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594004	MRC-SW9A-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594005	MRC-SW6B-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594007	MRC-SW7A-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594009	MRC-SW15A-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594010	MRC-SW16A-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594012	MRC-SW6A-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594013	MRC-SW6A-S-DUP-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594015	MRC-SW8A-S-20200428	EPA 680	EXTR/60290	EPA 680	SVMS/35751
3099594001	MRC-SW7B-S-20200428			SW846 8260C	VOMS/54873
3099594002	MRC-SW9B-S-20200428			SW846 8260C	VOMS/54873
3099594003	MRC-SW11A-S-20200428			SW846 8260C	VOMS/54873
3099594006	TB-20200428			SW846 8260C	VOMS/54873
3099594003	MRC-SW11A-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594008	MRC-SW11B-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594011	MRC-SW18A-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594016	MRC-SW5A2-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594017	MRC-SW13A-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3099594 LM MRC 2020 April SWS

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3099594018	MRC-SW5A1-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594019	MRC-SW5B-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594022	MRC-SW12A-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594024	MRC-SW8B-S-20200428	EPA 680	EXTR/60311	EPA 680	SVMS/35751
3099594004	MRC-SW9A-S-20200428			SW846 8260C	VOMS/54908
3099594005	MRC-SW6B-S-20200428			SW846 8260C	VOMS/54908
3099594007	MRC-SW7A-S-20200428			SW846 8260C	VOMS/54908
3099594008	MRC-SW11B-S-20200428			SW846 8260C	VOMS/54908
3099594009	MRC-SW15A-S-20200428			SW846 8260C	VOMS/54908
3099594010	MRC-SW16A-S-20200428			SW846 8260C	VOMS/54908
3099594011	MRC-SW18A-S-20200428			SW846 8260C	VOMS/54908
3099594012	MRC-SW6A-S-20200428			SW846 8260C	VOMS/54908
3099594013	MRC-SW6A-S-DUP-20200428			SW846 8260C	VOMS/54908
3099594014	MRC-SW17A-S-20200428			SW846 8260C	VOMS/54908
3099594015	MRC-SW8A-S-20200428			SW846 8260C	VOMS/54908
3099594016	MRC-SW5A2-S-20200428			SW846 8260C	VOMS/54908
3099594017	MRC-SW13A-S-20200428			SW846 8260C	VOMS/54908
3099594018	MRC-SW5A1-S-20200428			SW846 8260C	VOMS/54908
3099594019	MRC-SW5B-S-20200428			SW846 8260C	VOMS/54908
3099594020	MRC-SW1A-20200428			SW846 8260C	VOMS/54908
3099594021	MRC-SW2A-20200428			SW846 8260C	VOMS/54908
3099594022	MRC-SW12A-S-20200428			SW846 8260C	VOMS/54908
3099594023	MRC-SW1A-DUP-20200428			SW846 8260C	VOMS/54908
3099594024	MRC-SW8B-S-20200428			SW846 8260C	VOMS/54917

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

* 3099594 *

(Lab Use Only) Received by Receiving Lab)

Client Name: AECOM
Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
Contact: Patrick Gratton
Phone#: 301-674-3199
Project Name/#: LM MRC 2020 April SWS
Bill To: Patrick Gratton

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [X] -Y patrick.gratton@aecom.com
Fax? [ ] -Y No.:

Cooler Temp: 3°C Therm ID: 441
No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

Container Type	CG	AG	AG								
Container Size	40mL	1L	1L								
Preservative	HCl	None	None								

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	PCBs (680)	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
MRC-SW7B-S-20200428	4/28/2020	850	G	SW	2		2		
MRC-SW9B-S-20200428	4/28/2020	915	G	SW	2		2		
MRC-SW11A-S-20200428	4/28/2020	1305	G	SW	2		2		
MRC-SW9A-S-20200428	4/28/2020	905	G	SW	2		2		
MRC-SW6B-S-20200428	4/28/2020	1000	G	SW	2	2	2		
TB-20200428	4/28/2020	1600	-	WQ	2				Water Quality, Trip Blank
MRC-SW7A-S-20200428	4/28/2020	840	G	SW	2		2		
MRC-SW11B-S-20200428	4/28/2020	1315	G	SW	2		2		
MRC-SW15A-S-20200428	4/28/2020	1025	G	SW	2		2		
MRC-SW16A-S-20200428	4/28/2020	1015	G	SW	2		2		

ALS Field Services: [X] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

Project Comments: Please also email data to holly.brown@aecom.com and zachary.nelgh@aecom.com

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	4/28/20	1640	2	4/28/20	1640
3	4/29/20	840	4	04-29-2020	1840
5			6		
7			8		
9			10		

Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type- EQuIS and .csv

* G=Grab; C=Composite
**Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 10/14

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 9594 — 2 of 3
ALS Quote #:

Client Name: AECOM
Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
Contact: Patrick Gratton
Phone#: 301-674-3199
Project Name/#: LM MRC 2020 April SWS
Bill To: Patrick Gratton

TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [X] -Y patrick.gratton@aecom.com
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	PCBs (680)							Sample/COC Comments
Container Type					CG	AG	AG							
Container Size					40mL	1L	1L							
Preservative					HCl	None	None							
					Enter Number of Containers Per Sample or Field Results Below.									
MRC-SW18A-S-20200428	4/28/2020	1400	G	SW	2		2							
MRC-SW6A-S-20200428	4/28/2020	930	G	SW	2	2	2							
MRC-SW6A-S-DUP-20200428	4/28/2020	935	G	SW	2	2	2							field duplicate
MRC-SW17A-20200428	4/28/2020	1730	G	SW	2	2								
MRC-SW8A-S-20200428	4/28/2020	1145	G	SW	6	6	6							Extra volume for MS/MSD
MRC-SW5A2-S-20200428	4/28/2020	1415	G	SW	2		2							
MRC-SW13A-S-20200428	4/28/2020	1340	G	SW	2		2							
MRC-SW5A1-S-20200428	4/28/2020	1440	G	SW	2		2							
MRC-SW5B-S-20200428	4/28/2020	1425	G	SW	2		2							
MRC-SW1A-20200428	4/28/2020	1540	G	SW	2	2								

Receipt Information (completed by Receiving Lab)
Cooler Temp: 5°C Therm ID: 441
No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALS Field Services: X Pickup _Labor _Composite Sampling _Rental Equipment _Other:

Project Comments: Please also email data to holly.brown@aecom.com and zachary.neigh@aecom.com

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] AECOM	4/29/20	1640	2 [illegible]	4/29/20	1640
3 [illegible]	4/29/20	1840	4 [illegible]	04-29-2020	1840
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type- EQuIS and .csv

* G=Grab; C=Composite
**Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 10/14

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 9594 | 3 of 3
ALS Quote #:

Client Name: AECOM
Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
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Phone#: 301-674-3199
Project Name/#: LM MRC 2020 April SWS
Bill To: Patrick Gratton

TAT [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [x] -Y patrick.gratton@aecom.com
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	VOCs (8260C)	1,4-Dioxane (8270D SIM)	PCBs (680)	Sample/COC Comments
					CG	AG	AG				
					40mL	1L	1L				
					HCl	None	None				
					ANALYSES/METHOD REQUESTED						
					Enter Number of Containers Per Sample or Field Results Below.						
MRC-SW2A-20200428	4/28/2020	1530	G	SW	2	2					
MRC-SW12A-S-20200428	4/28/2020	1330	G	SW	2		2				
MRC-SW1A-DUP-20200428	4/28/2020	1545	G	SW	2	2					field duplicate
MRC-SW8B-S-20200428	4/28/2020	1220	G	SW	6	6	6				Extra volume for MS/MSD
	4/28/2020		G	SW							
	4/28/2020		G	SW							
	4/28/2020		G	SW							
	4/28/2020		G	SW							
	4/28/2020		G	SW							
	4/28/2020		G	SW							

Receipt Information (completed by Receiving Lab)
Cooler Temp: 5 °C Therm ID: 441
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALS Field Services: [X] Pickup _Labor _Composite Sampling _Rental Equipment _Other:

Project Comments: Pleae also email data to holly.brown@aecom.com and zachary.neigh@aecom.com

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AECOM	4/29/20	1640	2 [signature]	4/29/20	1640
3 [signature]	4/29/20	1840	4 [signature]	04-29-2020	1840
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type- EQuIS and .csv

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 10/14

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: AECOM | Work Order #: 9594 | Initials: | Date: 4/28/20

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	(YES)	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?[1]	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	(YES)	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	(NO)
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #: 1

Temperature (°C): 5

Thermometer ID: 441

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

[1]Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

Rev 1/20/2020

EPA 680: Waters

Files Used:

(1) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121824.D 19-DEC-2019 00:30
(2) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121825.D 19-DEC-2019 01:00
(3) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121826.D 19-DEC-2019 01:30
(4) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121827.D 19-DEC-2019 01:59
(5) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121828.D 19-DEC-2019 02:29
(6) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121829.D 19-DEC-2019 02:59
(7) \\almdtws014\TargetData\Chem2\ms06.i\6-2019\6191218A_680.B\6121830.D 19-DEC-2019 03:28

Compound Name	1	2	3	4	5	6	7	Avg.	St.Dev.	MDL	%RSD	Rec Avg.	Limits
Monochlorobiphenyls	0.016	0.015	0.014	0.016	0.015	0.015	0.014	0.015	0.001	0.002666	5.6	75.4	50-150
Dichlorobiphenyls	0.016	0.015	0.014	0.015	0.015	0.015	0.014	0.015	0.001	0.002487	5.3	75.15	50-150
Trichlorobiphenyls	0.016	0.015	0.015	0.016	0.015	0.015	0.014	0.015	0.001	0.00171	3.6	75.78	50-150
Tetrachlorobiphenyls	0.031	0.027	0.027	0.029	0.028	0.027	0.028	0.028	0.001	0.004478	5	70.57	50-150
Pentachlorobiphenyls	0.034	0.032	0.033	0.033	0.034	0.032	0.03	0.032	0.001	0.003673	3.6	80.96	50-150
Hexachlorobiphenyls	0.032	0.03	0.032	0.031	0.03	0.029	0.027	0.03	0.002	0.005459	5.8	75.3	50-150
Heptachlorobiphenyls	0.046	0.041	0.047	0.046	0.044	0.041	0.038	0.043	0.003	0.010308	7.6	71.78	50-150
Octachlorobiphenyls	0.046	0.043	0.046	0.043	0.045	0.04	0.036	0.043	0.003	0.010585	7.9	71.06	50-150
Nonachlorobiphenyls	0.061	0.056	0.062	0.056	0.057	0.052	0.05	0.056	0.004	0.014041	7.9	70.49	50-150
Decachlorobiphenyl	0.071	0.07	0.076	0.066	0.065	0.062	0.058	0.067	0.006	0.019118	9.1	66.86	50-150

Units = ug/L

APPENDIX D
Laboratory Analytical Result Table

		MRC-SW5A1-S 04/28/2020 Field Sample					MRC-SW5A2-S 04/28/2020 Field Sample					MRC-SW5B-S 04/28/2020 Field Sample					MRC-SW6A-S 04/28/2020 Field Sample				
Analyte	**CAS Number**	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC
VOLATILES (µg/L)																					
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
1,1,1-Trichloroethane	71-55-6	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
1,1,2-Trichloroethane	79-00-5	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
1,1-Dichloroethane	75-34-3	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,1-Dichloroethylene	75-35-4	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
1,2,3-Trichlorobenzene	87-61-6	ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U	
1,2,3-Trichloropropane	96-18-4	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
1,2,4-Trichlorobenzene	120-82-1	ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U	
1,2,4-Trimethylbenzene	95-63-6	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U	
1,2-Dibromoethane	106-93-4	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,2-Dichlorobenzene	95-50-1	ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U	
1,2-Dichloroethane	107-06-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
1,2-Dichloroethylene (total)	540-59-0	ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U	
1,2-Dichloropropane	78-87-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
1,3-Dichlorobenzene	541-73-1	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,3-Dichloropropane	142-28-9	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
1,4-Dichlorobenzene	106-46-7	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
2,2-Dichloropropane	594-20-7	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
2-Butanone	78-93-3	ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U	
2-Chloroethylvinylether	110-75-8	ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U	
2-Chlorotoluene	95-49-8	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
2-Hexanone	591-78-6	ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U	
2-Phenylbutane	135-98-8	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
4-Chlorotoluene	106-43-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
4-Methyl-2-Pentanone	108-10-1	ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U	
Acetone	67-64-1	**7.0**	**3.1**	**10.0**	**J**		**7.3**	**3.1**	**10.0**	**J**		**7.0**	**3.1**	**10.0**	**J**		**36.9**	**3.1**	**10.0**	**J**	**fd**
Benzene	71-43-2	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Bromobenzene	108-86-1	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromochloromethane	74-97-5	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromodichloromethane	75-27-4	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
Bromoform	75-25-2	ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U	
Bromomethane	74-83-9	ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U	
Carbon Disulfide	75-15-0	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Carbon Tetrachloride	56-23-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Chlorobenzene	108-90-7	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Chloroethane	75-00-3	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Chloroform	67-66-3	ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U	
Chloromethane	74-87-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
cis-1,2-Dichloroethene	156-59-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
CYCLOHEXANE	110-82-7	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
Cymene	99-87-6	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Dibromochloromethane	124-48-1	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
Dibromomethane	74-95-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Dichlorodifluoromethane (CFC-12)	75-71-8	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Dichloropropene, 1,3-	542-75-6	ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U	
Diisopropyl Ether	108-20-3	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
Ethyl Tertiary-Butyl Ether	637-92-3	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Ethylbenzene	100-41-4	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
Freon TF (Chlorinated fluorocarbon)	76-13-1	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Hexachloro-1,3-Butadiene	87-68-3	ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U	
Isopropylbenzene	98-82-8	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
Methyl acetate	79-20-9	ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U	
Methyl Tert-Butyl Ether	1634-04-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
METHYLCYLOHEXANE	108-87-2	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Methylene Chloride	75-09-2	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
mp-xylene	179601-23-1	ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U	
Naphthalene	91-20-3	ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U	
N-Butylbenzene	104-51-8	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
N-Propylbenzene	103-65-1	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
o-Xylene	95-47-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Styrene	100-42-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
TERT-BUTYL ALCOHOL	75-65-0	ND	2.2	10.0	U		**2.3**	**2.2**	**10.0**	**J**		ND	2.2	10.0	U		ND	2.2	10.0	U	
Tert-Butylbenzene	98-06-6	ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U	
Tertiary-Amyl Methyl Ether	994-05-8	ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U	
Tetrachloroethene	127-18-4	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
Toluene	108-88-3	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Trans-1,2-Dichloroethene	156-60-5	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Trans-1,3-Dichloropropene	10061-02-6	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
TRICHLOROETHENE	79-01-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		**1.3**	**0.33**	**1.0**		
Trichlorofluoromethane	75-69-4	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
VINYL ACETATE	108-05-4	ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U	
Vinyl Chloride	75-01-4	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Xylenes (Total)	1330-20-7	ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U	
SEMIVOLATILES (µg/L)																					
1,4-Dioxane	123-91-1	NS					NS					NS					**0.026**	**0.014**	**0.10**	**J**	
PCB HOMOLOGS (µg/L)																					
Decachlorobiphenyl	2051-24-3	ND	0.021	0.052	U		ND	0.022	0.054	U		ND	0.022	0.054	U		ND	0.022	0.056	U	
Dichlorobiphenyls, Total	25512-42-9	ND	0.0026	0.010	U		ND	0.0027	0.011	U		ND	0.0027	0.011	U		ND	0.0028	0.011	U	
Heptachlorobiphenyls, Total	28655-71-2	ND	0.011	0.031	U		ND	0.012	0.033	U		ND	0.012	0.032	U		ND	0.012	0.034	U	
Hexachlorobiphenyls, Total	26601-64-9	ND	0.0093	0.021	U		ND	0.0098	0.022	U		ND	0.0097	0.022	U		ND	0.010	0.022	U	
Monochlorobiphenyls, Total	27323-18-8	ND	0.0031	0.010	U		ND	0.0033	0.011	U		ND	0.0032	0.011	U		ND	0.0034	0.011	U	
Nonachlorobiphenyls, Total	53742-07-7	ND	0.021	0.041	U		ND	0.022	0.043	U		ND	0.022	0.043	U		ND	0.022	0.045	U	
Octachlorobiphenyls, Total	55722-26-4	ND	0.011	0.031	U		ND	0.012	0.033	U		ND	0.012	0.032	U		ND	0.012	0.034	U	
Pentachlorobiphenyls, Total	25429-29-2	ND	0.0062	0.021	U		ND	0.0065	0.022	U		ND	0.0065	0.022	U		ND	0.0067	0.022	U	
Tetrachlorobiphenyls, Total	26914-33-0	ND	0.0073	0.021	U		ND	0.0076	0.022	U		ND	0.0076	0.022	U		ND	0.0078	0.022	U	
Trichlorobiphenyls, Total	25323-68-6	ND	0.0041	0.010	U		ND	0.0043	0.011	U		ND	0.0043	0.011	U		ND	0.0045	0.011	U	
Total Polychlorinated biphenyls (PCBs)	1336-36-3	ND	-	-	U		ND	-	-	U		ND	-	-	U	-	ND	-	-	U	

Bold values indicate detections

Definitions
FQ - Final Qualifier
MDL - Method Detection Limit
MRC - Middle River Complex
ND - not detected
NS - not sampled
RC - Reason Code
RL - Reporting Limit
SW - surface water
µg/L - micrograms per liter

Data Qualifiers and Reason Codes
J = Estimated concentration
U = The analyte was analyzed for, but not detected at a level greater than or equal to the level of the Method Detection Limit (MDL) for sample and method.
UJ = The analyte was not detected at a level greater than or equal to the MDL. However, the reported MDL is approximate and may be inaccurate or imprecise.
B = The associated method blank or field blank displayed a detection greater than the MDL.
The reported result value is unchanged and did not require further qualification by data reviewers.
bt = Trip blank contamination
fd = Field duplicate imprecision
m = Matrix spike percent recovery anomaly

		MRC-SW6A-S 04/28/2020 Field Duplicate					MRC-SW6B-S 04/28/2020 Field Sample					MRC-SW7A-S 04/28/2020 Field Sample					MRC-SW7B-S 04/28/2020 Field Sample				
Analyte	**CAS Number**	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC
VOLATILES (µg/L)																					
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
1,1,1-Trichloroethane	71-55-6	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
1,1,2-Trichloroethane	79-00-5	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
1,1-Dichloroethane	75-34-3	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,1-Dichloroethylene	75-35-4	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
1,2,3-Trichlorobenzene	87-61-6	ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U	
1,2,3-Trichloropropane	96-18-4	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
1,2,4-Trichlorobenzene	120-82-1	ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U	
1,2,4-Trimethylbenzene	95-63-6	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U	
1,2-Dibromoethane	106-93-4	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,2-Dichlorobenzene	95-50-1	ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U	
1,2-Dichloroethane	107-06-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
1,2-Dichloroethylene (total)	540-59-0	ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U	
1,2-Dichloropropane	78-87-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
1,3-Dichlorobenzene	541-73-1	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,3-Dichloropropane	142-28-9	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
1,4-Dichlorobenzene	106-46-7	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
2,2-Dichloropropane	594-20-7	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
2-Butanone	78-93-3	ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U	
2-Chloroethylvinylether	110-75-8	ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	UJ	m
2-Chlorotoluene	95-49-8	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
2-Hexanone	591-78-6	ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U	
2-Phenylbutane	135-98-8	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
4-Chlorotoluene	106-43-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
4-Methyl-2-Pentanone	108-10-1	ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U	
Acetone	67-64-1	**5.1**	**3.1**	**10.0**	**J**	**fd**	**23.9**	**3.1**	**10.0**			**9.2**	**3.1**	**10.0**	**J**		**10.5**	**3.1**	**10.0**		
Benzene	71-43-2	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Bromobenzene	108-86-1	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromochloromethane	74-97-5	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromodichloromethane	75-27-4	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
Bromoform	75-25-2	ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U	
Bromomethane	74-83-9	ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U	
Carbon Disulfide	75-15-0	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Carbon Tetrachloride	56-23-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Chlorobenzene	108-90-7	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Chloroethane	75-00-3	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Chloroform	67-66-3	ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U	
Chloromethane	74-87-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
cis-1,2-Dichloroethene	156-59-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
CYCLOHEXANE	110-82-7	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
Cymene	99-87-6	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Dibromochloromethane	124-48-1	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
Dibromomethane	74-95-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Dichlorodifluoromethane (CFC-12)	75-71-8	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Dichloropropene, 1,3-	542-75-6	ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U	
Diisopropyl Ether	108-20-3	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
Ethyl Tertiary-Butyl Ether	637-92-3	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Ethylbenzene	100-41-4	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
Freon TF (Chlorinated fluorocarbon)	76-13-1	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Hexachloro-1,3-Butadiene	87-68-3	ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U	
Isopropylbenzene	98-82-8	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
Methyl acetate	79-20-9	ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U	
Methyl Tert-Butyl Ether	1634-04-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
METHYLCYLOHEXANE	108-87-2	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Methylene Chloride	75-09-2	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
mp-xylene	179601-23-1	ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U	
Naphthalene	91-20-3	ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U	
N-Butylbenzene	104-51-8	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
N-Propylbenzene	103-65-1	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
o-Xylene	95-47-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Styrene	100-42-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
TERT-BUTYL ALCOHOL	75-65-0	ND	2.2	10.0	U		ND	2.2	10.0	U		ND	2.2	10.0	U		ND	2.2	10.0	U	
Tert-Butylbenzene	98-06-6	ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U	
Tertiary-Amyl Methyl Ether	994-05-8	ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U	
Tetrachloroethene	127-18-4	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
Toluene	108-88-3	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Trans-1,2-Dichloroethene	156-60-5	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Trans-1,3-Dichloropropene	10061-02-6	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
TRICHLOROETHENE	79-01-6	ND	0.33	1.0	U		**0.69**	**0.33**	**1.0**	**J**		ND	0.33	1.0	U		ND	0.33	1.0	U	
Trichlorofluoromethane	75-69-4	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
VINYL ACETATE	108-05-4	ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U	
Vinyl Chloride	75-01-4	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Xylenes (Total)	1330-20-7	ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U	
SEMIVOLATILES (µg/L)																					
1,4-Dioxane	123-91-1	**0.029**	**0.014**	**0.10**	**J**		**0.028**	**0.015**	**0.11**	**J**		NS					NS				
PCB HOMOLOGS (µg/L)																					
Decachlorobiphenyl	2051-24-3	ND	0.022	0.056	U		ND	0.022	0.056	U		ND	0.022	0.056	U		ND	0.022	0.055	U	
Dichlorobiphenyls, Total	25512-42-9	ND	0.0028	0.011	U		ND	0.0028	0.011	U		ND	0.0028	0.011	U		ND	0.0028	0.011	U	
Heptachlorobiphenyls, Total	28655-71-2	ND	0.012	0.034	U		ND	0.012	0.034	U		ND	0.012	0.033	U		ND	0.012	0.033	U	
Hexachlorobiphenyls, Total	26601-64-9	ND	0.010	0.022	U		ND	0.010	0.022	U		ND	0.010	0.022	U		ND	0.0099	0.022	U	
Monochlorobiphenyls, Total	27323-18-8	ND	0.0034	0.011	U		ND	0.0034	0.011	U		ND	0.0033	0.011	U		ND	0.0033	0.011	U	
Nonachlorobiphenyls, Total	53742-07-7	ND	0.022	0.045	U		ND	0.022	0.045	U		ND	0.022	0.044	U		ND	0.022	0.044	U	
Octachlorobiphenyls, Total	55722-26-4	ND	0.012	0.034	U		ND	0.012	0.034	U		ND	0.012	0.033	U		ND	0.012	0.033	U	
Pentachlorobiphenyls, Total	25429-29-2	ND	0.0067	0.022	U		ND	0.0067	0.022	U		ND	0.0067	0.022	U		ND	0.0066	0.022	U	
Tetrachlorobiphenyls, Total	26914-33-0	ND	0.0078	0.022	U		ND	0.0079	0.022	U		ND	0.0078	0.022	U		ND	0.0077	0.022	U	
Trichlorobiphenyls, Total	25323-68-6	ND	0.0045	0.011	U		ND	0.0045	0.011	U		ND	0.0044	0.011	U		ND	0.0044	0.011	U	
Total Polychlorinated biphenyls (PCBs)	1336-36-3	ND	-	-	U		ND	-	-	U		ND	-	-	U		ND	-	-	U	

Bold values indicate detections

Definitions
FQ - Final Qualifier
MDL - Method Detection Limit
MRC - Middle River Complex
ND - not detected
NS - not sampled
RC - Reason Code
RL - Reporting Limit
SW - surface water
µg/L - micrograms per liter

Data Qualifiers and Reason Codes
J = Estimated concentration
U = The analyte was analyzed for, but not detected at a level greater t
UJ = The analyte was not detected at a level greater than or equal to t
B = The associated method blank or field blank displayed a detection
The reported result value is unchanged and did not require furthe
bt = Trip blank contamination
fd = Field duplicate imprecision
m = Matrix spike percent recovery anomaly

		MRC-SW8A-S 04/28/2020 Field Sample					MRC-SW8B-S 04/28/2020 Field Sample					MRC-SW9A-S 04/28/2020 Field Sample					MRC-SW9B-S 04/28/2020 Field Sample				
Analyte	**CAS Number**	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC
VOLATILES (µg/L)																					
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
1,1,1-Trichloroethane	71-55-6	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
1,1,2-Trichloroethane	79-00-5	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
1,1-Dichloroethane	75-34-3	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,1-Dichloroethylene	75-35-4	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
1,2,3-Trichlorobenzene	87-61-6	ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U	
1,2,3-Trichloropropane	96-18-4	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
1,2,4-Trichlorobenzene	120-82-1	ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U	
1,2,4-Trimethylbenzene	95-63-6	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U	
1,2-Dibromoethane	106-93-4	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,2-Dichlorobenzene	95-50-1	ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U	
1,2-Dichloroethane	107-06-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
1,2-Dichloroethylene (total)	540-59-0	ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U	
1,2-Dichloropropane	78-87-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
1,3-Dichlorobenzene	541-73-1	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,3-Dichloropropane	142-28-9	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
1,4-Dichlorobenzene	106-46-7	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
2,2-Dichloropropane	594-20-7	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
2-Butanone	78-93-3	ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U	
2-Chloroethylvinylether	110-75-8	ND	0.38	2.0	UJ	m	ND	0.38	2.0	UJ	m	ND	0.38	2.0	U		ND	0.38	2.0	U	
2-Chlorotoluene	95-49-8	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
2-Hexanone	591-78-6	ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U	
2-Phenylbutane	135-98-8	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
4-Chlorotoluene	106-43-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
4-Methyl-2-Pentanone	108-10-1	ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U	
Acetone	67-64-1	**22.0**	**3.1**	**10.0**			**10.5**	**3.1**	**10.0**			**44.4**	**3.1**	**10.0**			**10.5**	**3.1**	**10.0**		
Benzene	71-43-2	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Bromobenzene	108-86-1	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromochloromethane	74-97-5	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromodichloromethane	75-27-4	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
Bromoform	75-25-2	ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U	
Bromomethane	74-83-9	ND	0.39	1.0	UJ	m	ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U	
Carbon Disulfide	75-15-0	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Carbon Tetrachloride	56-23-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Chlorobenzene	108-90-7	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Chloroethane	75-00-3	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Chloroform	67-66-3	ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U	
Chloromethane	74-87-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
cis-1,2-Dichloroethene	156-59-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
CYCLOHEXANE	110-82-7	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
Cymene	99-87-6	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Dibromochloromethane	124-48-1	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
Dibromomethane	74-95-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Dichlorodifluoromethane (CFC-12)	75-71-8	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Dichloropropene, 1,3-	542-75-6	ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U	
Diisopropyl Ether	108-20-3	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
Ethyl Tertiary-Butyl Ether	637-92-3	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Ethylbenzene	100-41-4	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
Freon TF (Chlorinated fluorocarbon)	76-13-1	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Hexachloro-1,3-Butadiene	87-68-3	ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U	
Isopropylbenzene	98-82-8	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
Methyl acetate	79-20-9	ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U	
Methyl Tert-Butyl Ether	1634-04-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
METHYLCYLOHEXANE	108-87-2	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Methylene Chloride	75-09-2	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
mp-xylene	179601-23-1	ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U	
Naphthalene	91-20-3	ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U	
N-Butylbenzene	104-51-8	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
N-Propylbenzene	103-65-1	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
o-Xylene	95-47-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Styrene	100-42-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
TERT-BUTYL ALCOHOL	75-65-0	**2.2**	**2.2**	**10.0**	**J**		ND	2.2	10.0	U		ND	2.2	10.0	U		ND	2.2	10.0	U	
Tert-Butylbenzene	98-06-6	ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U	
Tertiary-Amyl Methyl Ether	994-05-8	ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U	
Tetrachloroethene	127-18-4	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
Toluene	108-88-3	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Trans-1,2-Dichloroethene	156-60-5	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Trans-1,3-Dichloropropene	10061-02-6	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
TRICHLOROETHENE	79-01-6	**2.2**	**0.33**	**1.0**			**0.77**	**0.33**	**1.0**	**J**		ND	0.33	1.0	U		ND	0.33	1.0	U	
Trichlorofluoromethane	75-69-4	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
VINYL ACETATE	108-05-4	ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U	
Vinyl Chloride	75-01-4	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Xylenes (Total)	1330-20-7	ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U	
SEMIVOLATILES (µg/L)																					
1,4-Dioxane	123-91-1	**0.028**	**0.015**	**0.12**	**J**		**0.028**	**0.014**	**0.11**	**J**		NS					NS				
PCB HOMOLOGS (µg/L)																					
Decachlorobiphenyl	2051-24-3	ND	0.024	0.059	U		ND	0.023	0.058	U		ND	0.022	0.056	U		ND	0.022	0.054	U	
Dichlorobiphenyls, Total	25512-42-9	ND	0.0029	0.012	U		ND	0.0029	0.012	U		ND	0.0028	0.011	U		ND	0.0027	0.011	U	
Heptachlorobiphenyls, Total	28655-71-2	ND	0.013	0.035	U		ND	0.013	0.035	U		ND	0.012	0.033	U		ND	0.012	0.033	U	
Hexachlorobiphenyls, Total	26601-64-9	ND	0.011	0.024	U		ND	0.010	0.023	U		ND	0.010	0.022	U		ND	0.0098	0.022	U	
Monochlorobiphenyls, Total	27323-18-8	ND	0.0035	0.012	U		ND	0.0035	0.012	U		ND	0.0033	0.011	U		ND	0.0033	0.011	U	
Nonachlorobiphenyls, Total	53742-07-7	ND	0.024	0.047	U		ND	0.023	0.046	U		ND	0.022	0.044	U		ND	0.022	0.043	U	
Octachlorobiphenyls, Total	55722-26-4	ND	0.013	0.035	U		ND	0.013	0.035	U		ND	0.012	0.033	U		ND	0.012	0.033	U	
Pentachlorobiphenyls, Total	25429-29-2	ND	0.0071	0.024	U		ND	0.0069	0.023	U		ND	0.0067	0.022	U		ND	0.0065	0.022	U	
Tetrachlorobiphenyls, Total	26914-33-0	ND	0.0082	0.024	U		ND	0.0081	0.023	U		ND	0.0078	0.022	U		ND	0.0076	0.022	U	
Trichlorobiphenyls, Total	25323-68-6	ND	0.0047	0.012	U		ND	0.0046	0.012	U		ND	0.0044	0.011	U		ND	0.0043	0.011	U	
Total Polychlorinated biphenyls (PCBs)	1336-36-3	ND	-	-	U		ND	-	-	U		ND	-	-	U		ND	-	-	U	

Bold values indicate detections

Definitions
FQ - Final Qualifier
MDL - Method Detection Limit
MRC - Middle River Complex
ND - not detected
NS - not sampled
RC - Reason Code
RL - Reporting Limit
SW - surface water
µg/L - micrograms per liter

Data Qualifiers and Reason Codes
J = Estimated concentration
U = The analyte was analyzed for, but not detected at a level greater t
UJ = The analyte was not detected at a level greater than or equal to t
B = The associated method blank or field blank displayed a detection
The reported result value is unchanged and did not require furthe
bt = Trip blank contamination
fd = Field duplicate imprecision
m = Matrix spike percent recovery anomaly

		MRC-SW11A-S 04/28/2020 Field Sample					MRC-SW11B-S 04/28/2020 Field Sample					MRC-SW12A-S 04/28/2020 Field Sample					MRC-SW13A-S 04/28/2020 Field Sample				
Analyte	**CAS Number**	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC
VOLATILES (µg/L)																					
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
1,1,1-Trichloroethane	71-55-6	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
1,1,2-Trichloroethane	79-00-5	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
1,1-Dichloroethane	75-34-3	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,1-Dichloroethylene	75-35-4	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
1,2,3-Trichlorobenzene	87-61-6	ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U	
1,2,3-Trichloropropane	96-18-4	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
1,2,4-Trichlorobenzene	120-82-1	ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U	
1,2,4-Trimethylbenzene	95-63-6	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U	
1,2-Dibromoethane	106-93-4	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,2-Dichlorobenzene	95-50-1	ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U	
1,2-Dichloroethane	107-06-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
1,2-Dichloroethylene (total)	540-59-0	ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U	
1,2-Dichloropropane	78-87-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
1,3-Dichlorobenzene	541-73-1	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,3-Dichloropropane	142-28-9	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
1,4-Dichlorobenzene	106-46-7	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
2,2-Dichloropropane	594-20-7	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
2-Butanone	78-93-3	ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U	
2-Chloroethylvinylether	110-75-8	ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U	
2-Chlorotoluene	95-49-8	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
2-Hexanone	591-78-6	ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U	
2-Phenylbutane	135-98-8	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
4-Chlorotoluene	106-43-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
4-Methyl-2-Pentanone	108-10-1	ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U	
Acetone	67-64-1	**19.1**	**3.1**	**10.0**			**12.4**	**3.1**	**10.0**			**23.4**	**3.1**	**10.0**			**26.2**	**3.1**	**10.0**		
Benzene	71-43-2	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Bromobenzene	108-86-1	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromochloromethane	74-97-5	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromodichloromethane	75-27-4	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
Bromoform	75-25-2	ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U	
Bromomethane	74-83-9	ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U	
Carbon Disulfide	75-15-0	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Carbon Tetrachloride	56-23-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Chlorobenzene	108-90-7	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Chloroethane	75-00-3	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Chloroform	67-66-3	ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U	
Chloromethane	74-87-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
cis-1,2-Dichloroethene	156-59-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
CYCLOHEXANE	110-82-7	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
Cymene	99-87-6	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Dibromochloromethane	124-48-1	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
Dibromomethane	74-95-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Dichlorodifluoromethane (CFC-12)	75-71-8	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Dichloropropene, 1,3-	542-75-6	ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U	
Diisopropyl Ether	108-20-3	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
Ethyl Tertiary-Butyl Ether	637-92-3	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Ethylbenzene	100-41-4	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
Freon TF (Chlorinated fluorocarbon)	76-13-1	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Hexachloro-1,3-Butadiene	87-68-3	ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U	
Isopropylbenzene	98-82-8	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
Methyl acetate	79-20-9	ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U	
Methyl Tert-Butyl Ether	1634-04-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
METHYLCYLOHEXANE	108-87-2	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Methylene Chloride	75-09-2	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
mp-xylene	179601-23-1	ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U	
Naphthalene	91-20-3	ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U	
N-Butylbenzene	104-51-8	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
N-Propylbenzene	103-65-1	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
o-Xylene	95-47-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Styrene	100-42-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
TERT-BUTYL ALCOHOL	75-65-0	ND	2.2	10.0	U		ND	2.2	10.0	U		**4.7**	**2.2**	**10.0**	**J**		ND	2.2	10.0	U	
Tert-Butylbenzene	98-06-6	ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U	
Tertiary-Amyl Methyl Ether	994-05-8	ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U	
Tetrachloroethene	127-18-4	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
Toluene	108-88-3	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Trans-1,2-Dichloroethene	156-60-5	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Trans-1,3-Dichloropropene	10061-02-6	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
TRICHLOROETHENE	79-01-6	ND	0.33	1.0	U		ND	0.33	1.0	U		**0.55**	**0.33**	**1.0**	**J**		ND	0.33	1.0	U	
Trichlorofluoromethane	75-69-4	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
VINYL ACETATE	108-05-4	ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U	
Vinyl Chloride	75-01-4	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Xylenes (Total)	1330-20-7	ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U	
SEMIVOLATILES (µg/L)																					
1,4-Dioxane	123-91-1	NS					NS					NS					NS				
PCB HOMOLOGS (µg/L)																					
Decachlorobiphenyl	2051-24-3	ND	0.022	0.054	U		ND	0.022	0.055	U		ND	0.021	0.052	U		ND	0.020	0.051	U	
Dichlorobiphenyls, Total	25512-42-9	ND	0.0027	0.011	U		ND	0.0027	0.011	U		ND	0.0026	0.010	U		ND	0.0026	0.010	U	
Heptachlorobiphenyls, Total	28655-71-2	ND	0.012	0.032	U		ND	0.012	0.033	U		ND	0.011	0.031	U		ND	0.011	0.031	U	
Hexachlorobiphenyls, Total	26601-64-9	ND	0.0097	0.022	U		ND	0.0099	0.022	U		ND	0.0094	0.021	U		ND	0.0092	0.020	U	
Monochlorobiphenyls, Total	27323-18-8	ND	0.0032	0.011	U		ND	0.0033	0.011	U		ND	0.0031	0.010	U		ND	0.0031	0.010	U	
Nonachlorobiphenyls, Total	53742-07-7	ND	0.022	0.043	U		ND	0.022	0.044	U		ND	0.021	0.042	U		ND	0.020	0.041	U	
Octachlorobiphenyls, Total	55722-26-4	ND	0.012	0.032	U		ND	0.012	0.033	U		ND	0.011	0.031	U		ND	0.011	0.031	U	
Pentachlorobiphenyls, Total	25429-29-2	ND	0.0065	0.022	U		ND	0.0066	0.022	U		ND	0.0063	0.021	U		ND	0.0061	0.020	U	
Tetrachlorobiphenyls, Total	26914-33-0	ND	0.0075	0.022	U		ND	0.0077	0.022	U		ND	0.0073	0.021	U		ND	0.0071	0.020	U	
Trichlorobiphenyls, Total	25323-68-6	ND	0.0043	0.011	U		ND	0.0044	0.011	U		ND	0.0042	0.010	U		ND	0.0041	0.010	U	
Total Polychlorinated biphenyls (PCBs)	1336-36-3	ND	-	-	U		ND	-	-	U		ND	-	-	U		ND	-	-	U	

Bold values indicate detections

Definitions
FQ - Final Qualifier
MDL - Method Detection Limit
MRC - Middle River Complex
ND - not detected
NS - not sampled
RC - Reason Code
RL - Reporting Limit
SW - surface water
µg/L - micrograms per liter

Data Qualifiers and Reason Codes
J = Estimated concentration
U = The analyte was analyzed for, but not detected at a level greater t
UJ = The analyte was not detected at a level greater than or equal to t
B = The associated method blank or field blank displayed a detection
The reported result value is unchanged and did not require furthe
bt = Trip blank contamination
fd = Field duplicate imprecision
m = Matrix spike percent recovery anomaly

		MRC-SW15A-S 04/28/2020 Field Sample					MRC-SW16A-S 04/28/2020 Field Sample					MRC-SW17A 04/28/2020 Field Sample					MRC-SW18A-S 04/28/2020 Field Sample				
Analyte	**CAS Number**	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC
VOLATILES (µg/L)																					
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
1,1,1-Trichloroethane	71-55-6	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
1,1,2-Trichloroethane	79-00-5	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
1,1-Dichloroethane	75-34-3	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,1-Dichloroethylene	75-35-4	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
1,2,3-Trichlorobenzene	87-61-6	ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U	
1,2,3-Trichloropropane	96-18-4	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
1,2,4-Trichlorobenzene	120-82-1	ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U	
1,2,4-Trimethylbenzene	95-63-6	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U	
1,2-Dibromoethane	106-93-4	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,2-Dichlorobenzene	95-50-1	ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U	
1,2-Dichloroethane	107-06-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
1,2-Dichloroethylene (total)	540-59-0	ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U	
1,2-Dichloropropane	78-87-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
1,3-Dichlorobenzene	541-73-1	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,3-Dichloropropane	142-28-9	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
1,4-Dichlorobenzene	106-46-7	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
2,2-Dichloropropane	594-20-7	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
2-Butanone	78-93-3	ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U	
2-Chloroethylvinylether	110-75-8	ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U	
2-Chlorotoluene	95-49-8	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
2-Hexanone	591-78-6	ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U	
2-Phenylbutane	135-98-8	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
4-Chlorotoluene	106-43-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
4-Methyl-2-Pentanone	108-10-1	ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U	
Acetone	67-64-1	**24.8**	**3.1**	**10.0**			**34.4**	**3.1**	**10.0**			**7.6**	**3.1**	**10.0**	**J**		**14.3**	**3.1**	**10.0**		
Benzene	71-43-2	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Bromobenzene	108-86-1	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromochloromethane	74-97-5	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromodichloromethane	75-27-4	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
Bromoform	75-25-2	ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U	
Bromomethane	74-83-9	ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U	
Carbon Disulfide	75-15-0	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Carbon Tetrachloride	56-23-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Chlorobenzene	108-90-7	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Chloroethane	75-00-3	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Chloroform	67-66-3	ND	0.21	1.0	U		ND	0.21	1.0	U		**0.42**	**0.21**	**1.0**	**B**	**bt**	ND	0.21	1.0	U	
Chloromethane	74-87-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
cis-1,2-Dichloroethene	156-59-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
CYCLOHEXANE	110-82-7	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
Cymene	99-87-6	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Dibromochloromethane	124-48-1	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
Dibromomethane	74-95-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Dichlorodifluoromethane (CFC-12)	75-71-8	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Dichloropropene, 1,3-	542-75-6	ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U	
Diisopropyl Ether	108-20-3	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
Ethyl Tertiary-Butyl Ether	637-92-3	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Ethylbenzene	100-41-4	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
Freon TF (Chlorinated fluorocarbon)	76-13-1	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Hexachloro-1,3-Butadiene	87-68-3	ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U	
Isopropylbenzene	98-82-8	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
Methyl acetate	79-20-9	ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U	
Methyl Tert-Butyl Ether	1634-04-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
METHYLCYLOHEXANE	108-87-2	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Methylene Chloride	75-09-2	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
mp-xylene	179601-23-1	ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U	
Naphthalene	91-20-3	ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U	
N-Butylbenzene	104-51-8	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
N-Propylbenzene	103-65-1	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
o-Xylene	95-47-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Styrene	100-42-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
TERT-BUTYL ALCOHOL	75-65-0	ND	2.2	10.0	U		ND	2.2	10.0	U		ND	2.2	10.0	U		ND	2.2	10.0	U	
Tert-Butylbenzene	98-06-6	ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U	
Tertiary-Amyl Methyl Ether	994-05-8	ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U	
Tetrachloroethene	127-18-4	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
Toluene	108-88-3	**0.39**	**0.23**	**1.0**	**J**		ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Trans-1,2-Dichloroethene	156-60-5	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Trans-1,3-Dichloropropene	10061-02-6	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
TRICHLOROETHENE	79-01-6	**0.87**	**0.33**	**1.0**	**J**		**0.90**	**0.33**	**1.0**	**J**		ND	0.33	1.0	U		ND	0.33	1.0	U	
Trichlorofluoromethane	75-69-4	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
VINYL ACETATE	108-05-4	ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U	
Vinyl Chloride	75-01-4	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Xylenes (Total)	1330-20-7	ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U	
SEMIVOLATILES (µg/L)																					
1,4-Dioxane	123-91-1	NS					NS					**0.032**	**0.014**	**0.11**	**J**		NS				
PCB HOMOLOGS (µg/L)																					
Decachlorobiphenyl	2051-24-3	ND	0.020	0.050	U		ND	0.022	0.056	U		NS					ND	0.021	0.053	U	
Dichlorobiphenyls, Total	25512-42-9	ND	0.0025	0.010	U		ND	0.0028	0.011	U		NS					ND	0.0026	0.011	U	
Heptachlorobiphenyls, Total	28655-71-2	ND	0.011	0.030	U		ND	0.012	0.034	U		NS					ND	0.012	0.032	U	
Hexachlorobiphenyls, Total	26601-64-9	ND	0.0090	0.020	U		ND	0.010	0.022	U		NS					ND	0.0095	0.021	U	
Monochlorobiphenyls, Total	27323-18-8	ND	0.0030	0.010	U		ND	0.0034	0.011	U		NS					ND	0.0032	0.011	U	
Nonachlorobiphenyls, Total	53742-07-7	ND	0.020	0.040	U		ND	0.022	0.045	U		NS					ND	0.021	0.042	U	
Octachlorobiphenyls, Total	55722-26-4	ND	0.011	0.030	U		ND	0.012	0.034	U		NS					ND	0.012	0.032	U	
Pentachlorobiphenyls, Total	25429-29-2	ND	0.0060	0.020	U		ND	0.0067	0.022	U		NS					ND	0.0063	0.021	U	
Tetrachlorobiphenyls, Total	26914-33-0	ND	0.0070	0.020	U		ND	0.0078	0.022	U		NS					ND	0.0074	0.021	U	
Trichlorobiphenyls, Total	25323-68-6	ND	0.0040	0.010	U		ND	0.0045	0.011	U		NS					ND	0.0042	0.011	U	
Total Polychlorinated biphenyls (PCBs)	1336-36-3	ND	-	-	U		ND	-	-	U		NS	-	-	-		ND	-	-	U	

Bold values indicate detections

Definitions
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The reported result value is unchanged and did not require furthe
bt = Trip blank contamination
fd = Field duplicate imprecision
m = Matrix spike percent recovery anomaly

		MRC-SW1A 04/28/2020 Field Sample					MRC-SW1A 04/28/2020 Field Duplicate					MRC-SW2A 04/28/2020 Field Sample				
Analyte	**CAS Number**	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC	Result	MDL	RL	FQ	RC
VOLATILES (µg/L)																
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
1,1,1-Trichloroethane	71-55-6	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
1,1,2-Trichloroethane	79-00-5	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
1,1-Dichloroethane	75-34-3	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,1-Dichloroethylene	75-35-4	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
1,2,3-Trichlorobenzene	87-61-6	ND	0.93	2.0	U		ND	0.93	2.0	U		ND	0.93	2.0	U	
1,2,3-Trichloropropane	96-18-4	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
1,2,4-Trichlorobenzene	120-82-1	ND	0.82	2.0	U		ND	0.82	2.0	U		ND	0.82	2.0	U	
1,2,4-Trimethylbenzene	95-63-6	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	ND	1.5	7.0	U		ND	1.5	7.0	U		ND	1.5	7.0	U	
1,2-Dibromoethane	106-93-4	ND	0.28	1.0	U		ND	0.28	1.0	U		ND	0.28	1.0	U	
1,2-Dichlorobenzene	95-50-1	ND	0.38	1.0	U		ND	0.38	1.0	U		ND	0.38	1.0	U	
1,2-Dichloroethane	107-06-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
1,2-Dichloroethylene (total)	540-59-0	ND	0.45	2.0	U		ND	0.45	2.0	U		ND	0.45	2.0	U	
1,2-Dichloropropane	78-87-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
1,3-Dichlorobenzene	541-73-1	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
1,3-Dichloropropane	142-28-9	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
1,4-Dichlorobenzene	106-46-7	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
2,2-Dichloropropane	594-20-7	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
2-Butanone	78-93-3	ND	1.8	10.0	U		ND	1.8	10.0	U		ND	1.8	10.0	U	
2-Chloroethylvinylether	110-75-8	ND	0.38	2.0	U		ND	0.38	2.0	U		ND	0.38	2.0	U	
2-Chlorotoluene	95-49-8	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
2-Hexanone	591-78-6	ND	1.3	5.0	U		ND	1.3	5.0	U		ND	1.3	5.0	U	
2-Phenylbutane	135-98-8	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
4-Chlorotoluene	106-43-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
4-Methyl-2-Pentanone	108-10-1	ND	1.5	5.0	U		ND	1.5	5.0	U		ND	1.5	5.0	U	
Acetone	67-64-1	**8.2**	**3.1**	**10.0**	**J**		**9.7**	**3.1**	**10.0**	**J**		**7.3**	**3.1**	**10.0**	**J**	
Benzene	71-43-2	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Bromobenzene	108-86-1	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromochloromethane	74-97-5	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Bromodichloromethane	75-27-4	ND	0.27	1.0	U		ND	0.27	1.0	U		ND	0.27	1.0	U	
Bromoform	75-25-2	ND	0.40	1.0	U		ND	0.40	1.0	U		ND	0.40	1.0	U	
Bromomethane	74-83-9	ND	0.39	1.0	U		ND	0.39	1.0	U		ND	0.39	1.0	U	
Carbon Disulfide	75-15-0	**0.35**	**0.23**	**1.0**	**J**		ND	0.23	1.0	U		ND	0.23	1.0	U	
Carbon Tetrachloride	56-23-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Chlorobenzene	108-90-7	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Chloroethane	75-00-3	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Chloroform	67-66-3	ND	0.21	1.0	U		ND	0.21	1.0	U		ND	0.21	1.0	U	
Chloromethane	74-87-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
cis-1,2-Dichloroethene	156-59-2	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
CYCLOHEXANE	110-82-7	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
Cymene	99-87-6	ND	0.32	1.0	U		ND	0.32	1.0	U		ND	0.32	1.0	U	
Dibromochloromethane	124-48-1	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
Dibromomethane	74-95-3	ND	0.31	1.0	U		ND	0.31	1.0	U		ND	0.31	1.0	U	
Dichlorodifluoromethane (CFC-12)	75-71-8	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Dichloropropene, 1,3-	542-75-6	ND	0.47	2.0	U		ND	0.47	2.0	U		ND	0.47	2.0	U	
Diisopropyl Ether	108-20-3	ND	0.25	1.0	U		ND	0.25	1.0	U		ND	0.25	1.0	U	
Ethyl Tertiary-Butyl Ether	637-92-3	ND	0.19	1.0	U		ND	0.19	1.0	U		ND	0.19	1.0	U	
Ethylbenzene	100-41-4	ND	0.34	1.0	U		ND	0.34	1.0	U		ND	0.34	1.0	U	
Freon TF (Chlorinated fluorocarbon)	76-13-1	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Hexachloro-1,3-Butadiene	87-68-3	ND	1.0	5.0	U		ND	1.0	5.0	U		ND	1.0	5.0	U	
Isopropylbenzene	98-82-8	ND	0.22	1.0	U		ND	0.22	1.0	U		ND	0.22	1.0	U	
Methyl acetate	79-20-9	ND	0.32	2.0	U		ND	0.32	2.0	U		ND	0.32	2.0	U	
Methyl Tert-Butyl Ether	1634-04-4	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
METHYLCYLOHEXANE	108-87-2	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Methylene Chloride	75-09-2	ND	0.45	1.0	U		ND	0.45	1.0	U		ND	0.45	1.0	U	
mp-xylene	179601-23-1	ND	0.52	2.0	U		ND	0.52	2.0	U		ND	0.52	2.0	U	
Naphthalene	91-20-3	ND	0.34	2.0	U		ND	0.34	2.0	U		ND	0.34	2.0	U	
N-Butylbenzene	104-51-8	ND	0.60	2.0	U		ND	0.60	2.0	U		ND	0.60	2.0	U	
N-Propylbenzene	103-65-1	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
o-Xylene	95-47-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Styrene	100-42-5	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
TERT-BUTYL ALCOHOL	75-65-0	**3.4**	**2.2**	**10.0**	**J**		**3.1**	**2.2**	**10.0**	**J**		**2.4**	**2.2**	**10.0**	**J**	
Tert-Butylbenzene	98-06-6	ND	0.44	2.0	U		ND	0.44	2.0	U		ND	0.44	2.0	U	
Tertiary-Amyl Methyl Ether	994-05-8	ND	0.20	1.0	U		ND	0.20	1.0	U		ND	0.20	1.0	U	
Tetrachloroethene	127-18-4	ND	0.35	1.0	U		ND	0.35	1.0	U		ND	0.35	1.0	U	
Toluene	108-88-3	ND	0.23	1.0	U		ND	0.23	1.0	U		ND	0.23	1.0	U	
Trans-1,2-Dichloroethene	156-60-5	ND	0.26	1.0	U		ND	0.26	1.0	U		ND	0.26	1.0	U	
Trans-1,3-Dichloropropene	10061-02-6	ND	0.29	1.0	U		ND	0.29	1.0	U		ND	0.29	1.0	U	
TRICHLOROETHENE	79-01-6	ND	0.33	1.0	U		ND	0.33	1.0	U		ND	0.33	1.0	U	
Trichlorofluoromethane	75-69-4	ND	0.24	1.0	U		ND	0.24	1.0	U		ND	0.24	1.0	U	
VINYL ACETATE	108-05-4	ND	1.6	5.0	U		ND	1.6	5.0	U		ND	1.6	5.0	U	
Vinyl Chloride	75-01-4	ND	0.30	1.0	U		ND	0.30	1.0	U		ND	0.30	1.0	U	
Xylenes (Total)	1330-20-7	ND	0.66	3.0	U		ND	0.66	3.0	U		ND	0.66	3.0	U	
SEMIVOLATILES (µg/L)																
1,4-Dioxane	123-91-1	**0.049**	**0.014**	**0.11**	**J**		**0.056**	**0.014**	**0.11**	**J**		**0.034**	**0.014**	**0.11**	**J**	
PCB HOMOLOGS (µg/L)																
Decachlorobiphenyl	2051-24-3	NS					NS					NS				
Dichlorobiphenyls, Total	25512-42-9	NS					NS					NS				
Heptachlorobiphenyls, Total	28655-71-2	NS					NS					NS				
Hexachlorobiphenyls, Total	26601-64-9	NS					NS					NS				
Monochlorobiphenyls, Total	27323-18-8	NS					NS					NS				
Nonachlorobiphenyls, Total	53742-07-7	NS					NS					NS				
Octachlorobiphenyls, Total	55722-26-4	NS					NS					NS				
Pentachlorobiphenyls, Total	25429-29-2	NS					NS					NS				
Tetrachlorobiphenyls, Total	26914-33-0	NS					NS					NS				
Trichlorobiphenyls, Total	25323-68-6	NS					NS					NS				
Total Polychlorinated biphenyls (PCBs)	1336-36-3	NS	-	-	-		NS	-	-	-		NS	-	-	-	

Bold values indicate detections

Definitions
FQ - Final Qualifier
MDL - Method Detection Limit
MRC - Middle River Complex
ND - not detected
NS - not sampled
RC - Reason Code
RL - Reporting Limit
SW - surface water
µg/L - micrograms per liter

Data Qualifiers and Reason Codes
J = Estimated concentration
U = The analyte was analyzed for, but not detected at a level greater t
UJ = The analyte was not detected at a level greater than or equal to t
B = The associated method blank or field blank displayed a detection
The reported result value is unchanged and did not require furthe
bt = Trip blank contamination
fd = Field duplicate imprecision
m = Matrix spike percent recovery anomaly