JUNE 2018 SURFACE WATER TECHNICAL MEMORANDUM FOR DARK HEAD COVE AND COW PEN CREEK
LOCKHEED MARTIN CORPORATION
MIDDLE RIVER COMPLEX
2323 EASTERN BOULEVARD
MIDDLE RIVER, MARYLAND

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ACRONYMS AND ABBREVIATIONS

AECOM	AECOM Technical Services, Inc.
BGE	Baltimore Gas and Electric
BTAG	Biological Technical Advisory Group
cis-1,2-DCE	*cis*-1,2-dichloroethene
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
Lockheed Martin	Lockheed Martin Corporation
MDE	Maryland Department of the Environment
MRC	Middle River Complex
ORP	oxygen reduction potential
TCE	trichloroethene
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

EXECUTIVE SUMMARY

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared this technical memorandum documenting the June 2018 surface water monitoring event at the Lockheed Martin Corporation 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 for the surface water monitoring program are to update surface water analytical data, to understand the nature and extent of contamination, to evaluate contaminant trends to supplement the ongoing remediation efforts, and to assess off-site contaminant migration. In addition, the current sampling program 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 pipeline and offshore sediments might be affecting the surface water.

Investigative activities that will be conducted from 2018 to 2020 as part of this surface water monitoring program include three annual rounds of sampling and chemical analysis of surface water in Dark Head Cove and Cow Pen Creek in April, June, and September of each year.

This technical memorandum evaluates the June 2018 surface water sampling analytical data based on current and historical results and estimates of potential groundwater to surface water discharge. On-site personnel collected 18 samples (17 field samples and one duplicate) from 17 sampling locations at Cow Pen Creek and Dark Head Cove on June 25-26, 2018, on behalf of Lockheed Martin Corporation.

Surface water samples were collected and sent to ALS Environmental (in Middletown, Pennsylvania) to be chemically analyzed for volatile organic compounds and 1,4-dioxane. The analytical results were compared to Maryland ambient water quality criteria for human health consumption of organisms (Code of Maryland Regulations 26.08.02.03), United States Environmental Protection Agency Region III Biological Technical Advisory Group freshwater screening levels (USEPA, 2006), and site-specific risk-based screening levels for swimming.

None of the analytical results were above screening levels. Findings from the June 2018 surface water sampling are as follows:

- 1,4-dioxane – detected at three locations below screening levels
- 1,2,4-trimethylbenzene – detected at one location below screening level
- 2-butanone – detected at one location below screening level
- acetone – detected at all locations below screening level
- bromodichloromethane – detected at one location below screening level
- bromomethane – detected at six locations below screening level
- carbon disulfide – detected at three locations below screening level
- chloroform – detected at one location below screening levels
- chloromethane – detected at one location, no screening levels exist
- *cis*-1,2-dichloroethene – detected at two locations below screening levels
- naphthalene – detected at one location below screening level
- trichloroethene – detected at five locations below screening levels

SECTION 1
INTRODUCTION

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared the following technical memorandum documenting the June 2018 surface water monitoring activities at the Lockheed Martin Corporation Middle River Complex in Middle River, Maryland (see Figure 1). This technical memorandum details the analytical results from 17 surface water samples and one duplicate surface water sample that were collected along 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 or direct discharge into storm drains, thereby discharging into surface water through nearby outfalls. Before 2017, surface water had been sampled annually. In 2017, the sampling frequency increased to three times per year (April, June, and September) to provide supporting data to show that volatile organic compounds were not reaching Dark Head Cove and Cow Pen Creek during implementation of the groundwater remedy at concentrations exceeding site-specific risk-based screening levels. Additional periodic sampling (in April for polychlorinated biphenyls, as described below) was conducted to determine if polychlorinated biphenyls were in surface water subsequent to the sediment removal actions and in place treatment that Lockheed Martin Corporation performed in Dark Head Cove between 2013 and 2017; and, to determine if the Block G 1,4-dioxane groundwater plume is discharging to Cow Pen Creek (see Appendix A).

The current surface water program is summarized in Table 1. Analytical testing for polychlorinated biphenyls is performed only in the April round of sampling for Dark Head Cove samples. Method 680 is used for polychlorinated biphenyl analysis of groundwater and surface water samples.

Surface water samples collected in Dark Head Cove in 2017 were not analyzed for 1,4-dioxane, as it is not a chemical of concern in groundwater in the southeastern portion of the Middle River Complex. Selected surface water samples collected in 2018 are analyzed for 1,4-dioxane because

it had been detected in the 2017 groundwater samples in the southeastern plume (eastern portion of Block E).

This technical memorandum is organized as follows:

- Section 1—Introduction: Presents objectives for the surface water monitoring program.
- Section 2—Site Background: Briefly describes 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

The Middle River Complex, part of the Chesapeake Industrial Park, is located at 2323 Eastern Boulevard in Middle River, Maryland. It is located 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, Inc., (a subsidiary of General Electric Company) 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. Applied NanoStructured Solutions, LLC, a subsidiary of Cabot Corporation engaged in research and design of nanotechnology applications, also occupies a portion of the Middle River Complex.

2.1 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.

2.2 MIDDLE RIVER COMPLEX CHARACTERISTICS

2.2.1 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.

2.2.2 Hydrology

The Middle River Complex is at the junction of Cow Pen Creek and Dark Head Cove. Both of these 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. Lockheed Martin Corporation maintains a National Pollutant Discharge Elimination System permit (state discharge permit No. 00-DP-0298, National Pollutant Discharge Elimination System No. MD0002852), issued by the Maryland Department of the Environment Industrial Discharge Permits Division, Water Management Administration. The permit covers storm-water discharge from the entire property, rather than from individual tenants.

2.2.3 Regional Hydrogeology

Sand and gravel zones in the unconsolidated surficial deposits at the Middle River Complex, when present, may 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. 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).

2.3 SURFACE WATER

Dark Head Cove and Cow Pen Creek receive groundwater discharge from the overall watershed and the Middle River Complex either directly or through outfalls. Chemicals of concern found in Middle River Complex groundwater (e.g., trichloroethene and 1,4-dioxane) have historically been detected at low levels both in creek and 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, 2005).

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, 2017b). The current annual sampling program 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 each year 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 will be 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* (AECOM, 2017).

3.1 SURFACE WATER SAMPLING

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. The meter was lowered to approximately 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. The one exception to this is MRC-SW17A, located in Cow Pen Creek which is very shallow at this location. MRC-SW17A was collected from the water surface to approximately three inches below the water surface (total water column thickness) using a dipper cup.

3.1.1 Dark Head Cove

Fourteen 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).

Three sampling locations west of Outfall 008 (MRC-SW13A-S, MRC-SW15A-S, and MRC-SW16A-S) do not have an associated "B" sample. These surface water samples were collected 10-feet offshore. These samples collect surface water from the area where the groundwater plume (originating in Block E and flowing through Block F) discharges to Dark Head Cove.

Outfall 005 has two outlets, 005E and 005W. One sample was collected at each outlet, 10 feet offshore, recorded as the MRC-SW5A1-S and MRC-SW5A2-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.

3.1.2 Cow Pen Creek

Two samples (MRC-SW1A and MRC-SW2A) were collected along the centerline of the Cow Pen Creek downgradient of Outfall 004, with one sample collected upstream of the southwestern trichloroethene (TCE) plume near the Block G swale outfall and one sample collected downstream of the southwestern TCE plume.

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. Table 1 summarizes the analytical constituents included in the 2018 monitoring program.

3.1.3 Chemical Analyses

All surface water samples were analyzed at ALS Environmental (in Middletown, Pennsylvania) for chemical analysis of VOCs and 1,4-dioxane. Sampling methods are described in the *2018-2020 Groundwater and Surface Water Monitoring Work Plan* (AECOM, 2017). Analytical methods are documented in the footnotes of Table 1.

One duplicate sample for each parameter (VOCs and 1,4-dioxane) was collected during the June 2018 surface water sampling. One trip blank sample per sampling event (i.e., one per cooler) was also collected for VOC analysis for quality assurance/quality control purposes. Water quality parameters, including color, temperature, pH, specific conductance, hardness, salinity, turbidity, dissolved oxygen, and oxidation-reduction potential (ORP), were measured at all surface water sampling locations at the time of sampling.

3.1.4 Staff Gauges and Tidal Stages

Tidal stage at the time of sample collection was recorded from two staff gauges shown on Figure 3. One staff gauge is located in Dark Head Cove at the confluence with the mouth of Cow Pen Creek (MRC-STAFF02) and the other is located in Dark Head Cove in the vicinity of Outfall 009 (MRC-STAFF01). Tidal stages were recorded on June 25, 2018, before and after sampling. When sampling began in Dark Head Cove on June 25, MRC-STAFF01 read 0.0 feet at approximately 1105 hours. By the completion of the Dark Head Cove sampling, the staff gauge read -0.4 feet at approximately 1500 hours. When sampling began in Cow Pen Creek on June 25th, MRC-STAFF02 read -0.4 feet at approximately 1525 hours. By the completion of the Cow Pen Creek sampling, the staff gauge read -0.4 feet at approximately 1600 hours. Tidal information from the Bowley Bar Point station, southeast of Middle River, Maryland, reported low tide at 1342 hours on June 25, 2018.

One sample, SW17A, was collected from Cow Pen Creek on June 26, 2018 at approximately 1035 hours. Tidal information from the Bowley Bar Point station, reported low tide at 1430 hours on June 26, 2018. All tidal information is documented on the surface water sampling forms, in Appendix B.

3.2 DOCUMENTATION

All site activities and observations, including an overall record of field activities, were recorded on electronic field log sheets and submitted in daily field reports to the Remediation Technical Operations (remediation oversite contractor for Lockheed Martin Corporation [Lockheed Martin]) and Lockheed Martin. Completed chains-of-custody and matrix specific sampling log sheets were maintained. Log sheets for each sample collected are presented in Appendix B. The Data Validation Report is presented in Appendix C. Chain of Custody forms are part of the Laboratory Analytical Reports presented in Appendix D.

Mobile Data Collection

AECOM used two of Esri's mobile applications, Survey123 and Collector for ArcGIS® (Esri, 2011) during groundwater and surface water data collection. They feature map and business logic that enhances a technician's ability to locate and record accurate data.

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. New records were created within Survey123, leveraging form-based business logic, including related reference tables, and if/then-style follow-up fields.

Upon sampling completion, the technician submitted the record from their mobile device, where it was synchronized with AECOM's *Portal for ArcGIS®*. The team could access data immediately once it had synchronized. Data was downloaded from *Portal for ArcGIS®* and were available to be used in any other geographic information system (GIS) or database management system. Surface water sampling locations were also surveyed using a handheld global positioning system receiver in the Maryland State Plane North American Datum 1983.

3.3 EQUIPMENT DECONTAMINATION

No decontamination fluids other than distilled water were used for the surface water sampling. Distilled water rinse was discharged directly into Dark Head Cove or Cow Pen Creek. Therefore, collecting and disposing of rinse water generated during this sampling event was not necessary.

3.4 WASTE MANAGEMENT

No investigation-derived waste was generated during this surface water sampling. General waste such as gloves and tubing, was 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 Validation 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 review. 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

(https://www.epa.gov/quality/epa-region-3-data-validation) 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 C.

The majority of the data is considered usable and meets the completeness requirement outlined in the Quality Assurance Project Plan. During the course of 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 major anomalies were identified over the course of data validation with minimal impact on overall data quality. The overall completeness of the data reviewed was acceptable at 99 percent.

3.6 EESH-GIS DATABASE

AECOM has uploaded surface water sampling locations and validated data into the Lockheed Martin EESH-GIS database.

3.7 SUSTAINABILITY APPROACH

AECOM incorporated Green and Sustainable Remediation practices into the groundwater and surface water monitoring program at the MRC to advance Lockheed Martin's Corporate EESH key objectives to protect, enhance, optimize and simplify, and to highlight the added values that sustainable practices bring.

AECOM implemented sustainable approaches in all aspects of work wherever practical and with prior approval from Lockheed Martin and the Remediation Technical Operations contractor (remediation oversite contractor for Lockheed Martin Corporation). For the MRC monitoring program, AECOM implemented paper-free electronic data collection across all aspects of the surface water sampling program. This data collection approach and the use of dedicated reusable tubing and rechargeable batteries for field instruments reduced total waste and provided resource efficiency. The utilization of local field staff, carpooling, and the use of locally sourced materials wherever possible contributed to reduced overall mobile emissions.

SECTION 4
ANALYTICAL RESULTS

Validated analytical data from the June 2018 surface water sampling 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 (USEPA) Region III Biological Technical Advisory Group (BTAG) freshwater screening levels (USEPA, 2006)
- Site-specific swimming screening levels. Site-specific swimming screening levels were developed in 2017 for trichloroethene (TCE), cis 1,2 dichloroethene (*cis*-1,2-DCE), and 1,4-dioxane for Dark Head Cove and Cow Pen Creek, Middle River Complex (MRC). These risk-based screening values were approved by the Maryland Department of the Environment (MDE) in 2017.

Table 2 outlines the detected analytes from each sampling location and compares it the screening levels established by each of the above entities. As shown in Table 2, the detected VOC and SVOC concentrations for both Cow Pen Creek and Dark Head Cove are well below their various respective screening criteria. 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) and 1,4-dioxane detections in June 2018. The distribution of detections is shown in Figure 4. Eleven VOCs were detected in surface water: 1,2,4-trimethylbenzene, 2-butanone, acetone, bromodichloromethane, bromomethane, carbon disulfide, chloroform, chloromethane, *cis*-1,2-DCE, naphthalene, and TCE. 1,4-dioxane was detected in all three Cow Pen Creek samples.

TCE, the primary VOC of concern associated with groundwater at MRC, was detected in five sampling locations in Dark Head Cove: SW6A-S, SW6B-S, SW8A-S, SW15A-S, and SW16A-S at concentrations ranging from 0.59 to 2.5 µg/L. The two highest concentration of TCE (2.5 µg/L in SW16A-S and 2.3 µg/L in SW15A-S) is where the southwestern portion of the Block F

groundwater plume may discharge to Dark Head Cove. All other TCE detected concentrations (with the exception of SW-6A-S [1.1 J^+, s]) are approximately an order of magnitude lower.

cis-1,2-DCE, a breakdown product of TCE, was detected in two surface water samples in Dark Head Cove: SW15A-S and SW16A-S at concentrations of 0.46 and 0.51 µg/L, respectively. A single detection of 1,2,4-trimethylbenzene was present at an estimated concentration of 0.61 µg/L in SW8A-S in Dark Head Cove and adjacent to the southeastern Block E TCE plume. In addition, SW8A-S had the only detection of naphthalene at an estimated concentration of 0.53 µg/L. Chloromethane was detected at one location in Dark Head Cove: SW5B-S, at an estimated concentration of 0.35 µg/L.

Chloroform was detected in one sampling location in Cow Pen Creek, in SW17A at a concentration of 1.1 µg/L. In addition, SW17A had the only detection of bromodichloromethane at an estimated concentration of 0.31 µg/L. 2-butanone was detected in one Cow Pen Creek sample, SW2A at an estimated concentration of 1.9 µg/L.

Acetone was detected in all surface water sampling locations, ranging from 7.4 to 21.5 micrograms per liter (µg/L). Acetone is a common laboratory contaminant used in decontaminating equipment. Many acetone sample detections have an associated "B" flag that was added during data validation, indicating that the detections are possibly due to sample carryover from the laboratory and might be false-positives.

Additional VOCs, bromomethane and carbon disulfide, were detected in some Cow Pen Creek samples and Dark Head Cove samples. However, all of these detections were qualified as "B" over the course of data validation due to detections of target analytes in the associated trip blanks and laboratory method blanks.

Trip blanks are used to monitor contamination of volatile organic compounds from ambient sources present during laboratory processing and field shipment. These blanks are prepared by the laboratory and travel with the bottleware shipment from the laboratory to the field, and then back to the laboratory with the collected field samples. Field samples are considered to be associated with specific trip blank results only if those samples were shipped in the same cooler as the trip blank. The blanks remain sealed from the moment that they are filled in the laboratory until they are extracted upon returning to the laboratory. While the vials are sealed,

contamination can only enter the blank water by diffusing across the Teflon® cap. Since this is an unlikely route of exposure, trip blank detections can usually be attributed to contamination present at the laboratory during the initial preparation of the trip blanks or during the analytical procedure. For this reason, detections in trip blanks are usually limited to common laboratory contaminants such as acetone, methylene chloride, and 2-butanone.

Method blanks are used to monitor contamination of target analytes during the analytical procedure. They are prepared by the laboratory for each analysis batch and are analyzed alongside field samples in that batch and undergo the same treatment as the field samples in the batch during extraction and analysis. Field samples are considered to be associated with method blanks only if they were prepared and analyzed in the same quality control batch. A detection in the method blank indicates that contamination is present in the laboratory and was introduced to the blank in the same spatial and temporal setting as the field samples. Therefore, if positive field sample results are associated with method blank detections and are within five times the concentration in the blank they are qualified "B". In instances where positive results in other blanks (trip blanks, field blanks, or equipment blanks) are qualified "B" due to method blank detections, the concentrations in those blanks would be considered false positives. Therefore, the field sample results associated with the other blanks would not be qualified "B" unless the method blanks in their respective analytical batches displayed detections.

Trip blank TB-062518 displayed a detection for acetone at 8.5 µg/L. The positive associated field sample results that were within five times the concentration in the trip blank were qualified "B" and should be considered usable as estimated values. Method blanks 2770157 and 2770696 displayed detections for carbon disulfide at 0.32 µg/L and bromomethane at 0.54 µg/L, respectively. The positive associated field sample results that were within five times the blank concentrations were qualified "B" and should be considered usable as estimated values.

Additionally, method blank 2766541 displayed a detection for 1,4-dioxane at 0.029 µg/L. The positive associated field sample results that were with five times the blank concentration were qualified "B" and should be considered usable as estimated values. If these detections were treated as true positives, no concentration of the associated "B" flagged field sample results would exceed the risk-based screening levels

Surface water sampling is dynamic in nature, creating an uneven distribution of contaminants within Dark Head Cove and Cow Pen Creek through tidal-zone mixing and mechanisms of the groundwater/surface water discharge/recharge relationship, which is being further evaluated as part of the Block F remedial design.

USEPA Region III and MDE have not established acute or chronic freshwater criteria protective of aquatic life 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 probability]). There are no established USEPA Region III or MDE acute or chronic freshwater criteria protective of aquatic life or human health consumption-of-aquatic-organism criteria for acetone or *cis*-1,2-DCE.

The USEPA Region III BTAG ecological screening level for TCE is 21 µg/L, whereas the screening levels for acetone and *cis*-1,2-DCE are 1,500 µg/L and 590 µg/L, respectively. The site-specific risk-based swimming criterion developed for TCE is 30 µg/L.

The maximum TCE concentration (2.5 µg/L) detected in this investigation is more than eight times below the most conservative regulatory screening level of 21 µg/L, and more than 12 times below the MDE-approved risk-based swimming screening level of 30 µg/L for evaluating exposure risks to swimmers (Table 2). The maximum *cis*-1,2-DCE concentration (0.51 J µg/L) detected in this investigation is more than 100 times below the most conservative screening criteria of the MDE-approved risk-based site-specific swimming screening level of 70 µg/L for evaluating exposure risks to swimmers. All other VOC detection results are below all ecological and human health screening criteria.

4.2 1,4-DIOXANE

As shown in Figure 4, 1,4-dioxane was detected in all three surface water sample from Cow Pen Creek with the highest concentration of 0.042 µg/L from SW17A. All samples are assigned a "J" by the laboratory, indicating these values are an estimated concentration below the method detection limit and below the reporting limit. These concentrations are negligible compared to the USEPA ecological screening level of 22,000 µg/L. The concentrations are also below the MDE-approved risk-based swimming screening level of 30 µg/L.

4.3 WATER QUALITY PARAMETERS

Water quality parameters were collected in the field for each of the 17 field samples collected during the June 2018 sampling. Water-quality-parameter data are presented in Table 3. Associated field parameters were measured at a depth of approximately one foot below the water surface, prior to sample collection.

The slightly basic pH values, ranging between 7.14 and 8.27, are consistent with natural surface water in this region. Turbidity was consistent in most samples, with the highest turbidity reported from SW1A within Cow Pen Creek at 20.8 nephelometric turbidity units. DO levels, ranging from 6.49 to 10.32 milligrams per liter, are typical values for a healthy estuarine environment. One exception to this is SW8A-S that has a DO value of 0.61 which may be due to the DO probe malfunctioning and may not be indicative of the actual DO concentration at SW8A-S. Additionally, all ORP values are positive, ranging from 161.5 to 205.1 millivolts, consistent with surface water containing oxygen. All water-quality parameters recorded during this event are typical of a tidally-controlled estuarine environment.

SECTION 5
SUMMARY

AECOM Technical Services, Inc. (AECOM) collected 18 samples (17 field samples and one duplicate) from 17 locations throughout Cow Pen Creek and Dark Head Cove on June 25-26, 2018 on behalf of Lockheed Martin Corporation (Lockheed Martin). The samples were collected, sent to a laboratory, and chemically analyzed for volatile organic compounds (VOCs) and 1,4-dioxane. The purpose of these analyses were to determine if these constituents are in surface water and, if so, are there indications of whether they originated from storm water outfalls, sediments, or groundwater plumes at the Middle River Complex (MRC).

Trichloroethene (TCE) was detected in five samples in Dark Head Cove and adjacent to the southeastern Blocks E/F TCE plume: SW6A-S, SW6B-S, SW8A-S, SW15A-S, and SW16A-S at concentrations ranging from 0.59 to 2.5 µg/L. The TCE detection in surface water is possibly due to groundwater to surface water discharge of the nearby TCE impacted groundwater plume, originating in Block E and discharging through Block F. 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, and well below the site-specific risk-based swimming screening level of 30 µg/L.

cis-1,2-dichloroethene, a breakdown product of TCE, was detected in two surface water samples in Dark Head Cove and adjacent to the southeastern Block E trichloroethene plume: SW15A-S and SW16A-S at concentrations of 0.46 µg/L and 0.51 µg/L, respectively. The maximum *cis*-1,2-DCE concentration (0.51 J µg/L) detected in this investigation is more than 100 times below the most conservative screening criteria of the MDE-approved site-specific risk-based swimming screening level of 70 µg/L for evaluating exposure risks to swimmers. All additional VOCs detected: 1,2,4-trimethylbenzene, 2-butanone, acetone, bromodichloromethane, bromomethane, carbon disulfide, chloroform, and naphthalene were below their respective ecological and human health screening criteria.

1,4-dioxane was detected in all three surface water samples from Cow Pen Creek with the highest estimated concentration of 0.042 µg/L from SW17A. These concentrations are negligible compared to the USEPA ecological screening level of 22,000 µg/L. The concentrations are also below the site-specific screening criterion for swimming of 30 µg/L.

AECOM plans to revise the *2018-2020 Groundwater and Surface Water Monitoring Work Plan* (AECOM, 2017) to include a 48-72 hour wait time prior to a scheduled surface water sampling event if there is a precipitation event (greater than 0.1 inches) to ensure site-representative sample data-quality and avoid chemicals of concern dilution influenced by rain events.

SECTION 6
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_____, 2017b. *National Functional Guidelines for Inorganic Superfund Methods Data Review.* EPA-540-R-2017-001. 2017. https://www.epa.gov/clp/national-functional-guidelines-inorganic-superfund-methods-data-review-ism024

FIGURES

Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2013 ESRI and its data suppliers).

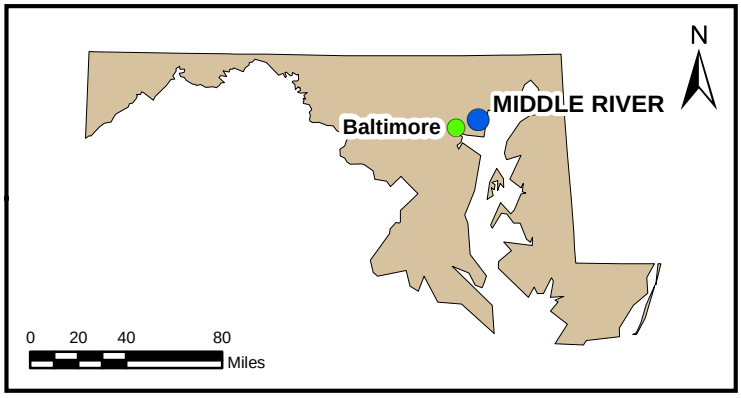


FIGURE 1

MIDDLE RIVER COMPLEX LOCATION MAP

Lockheed Martin Corporation
Middle River Complex, Middle River, Maryland

DATE MODIFIED:	CREATED BY:	SOURCE:
10/29/15	JEE	Tetra Tech 2016-2017 GW & SW Monitoring WP

AECOM

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sitemap_may2015.mxd)
10/29/15 -- JEE

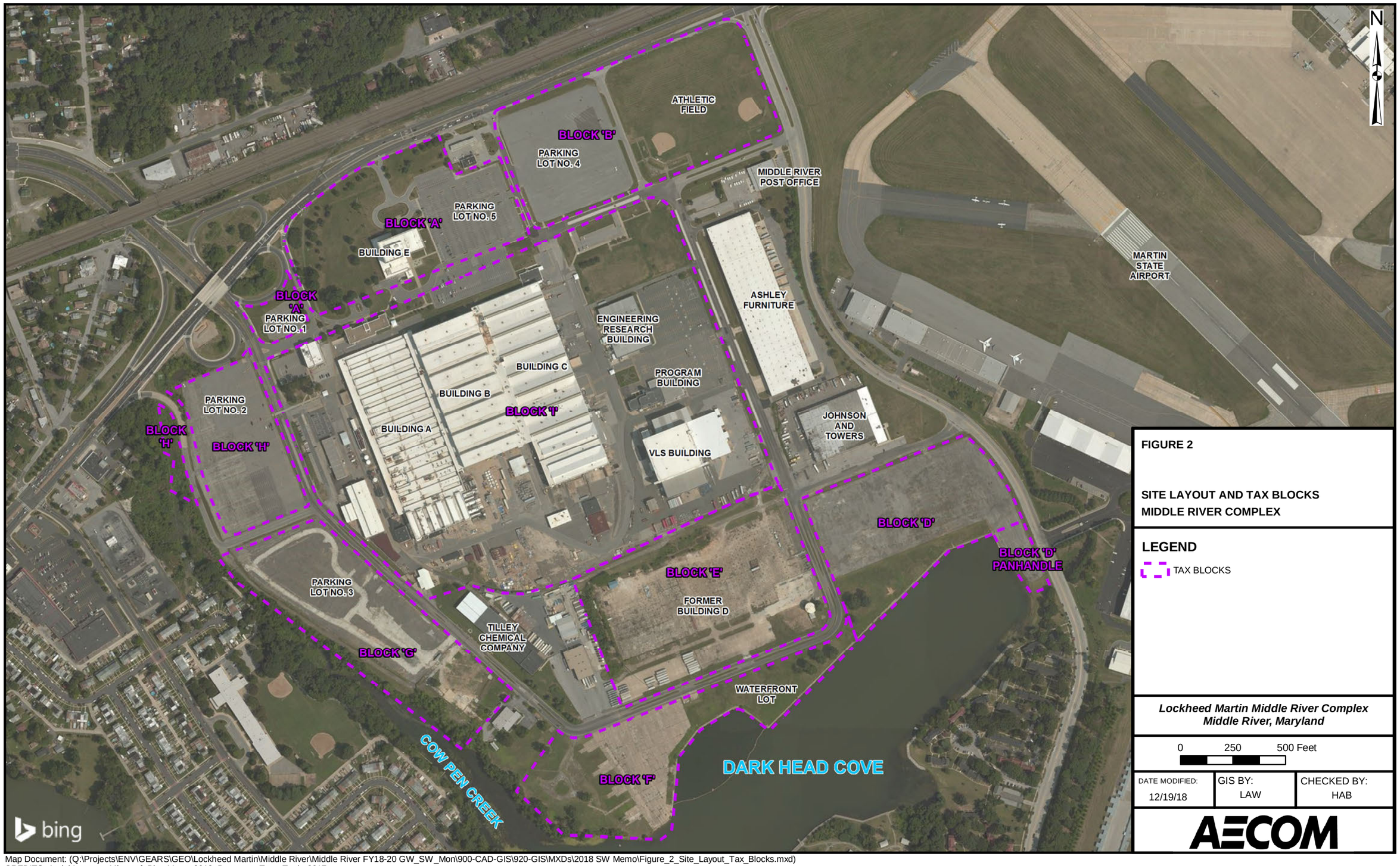


FIGURE 2

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:
12/19/18	LAW	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\2018 SW Memo\Figure_2_Site_Layout_Tax_Blocks.mxd)
CREDITS: Aerial Imagery, Microsoft Bing Maps, 2018; Basemap, Tetra Tech, 2017

FIGURE 3

2018 SURFACE WATER SAMPLING LOCATIONS
COW PEN CREEK AND DARK HEAD COVE

LEGEND

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

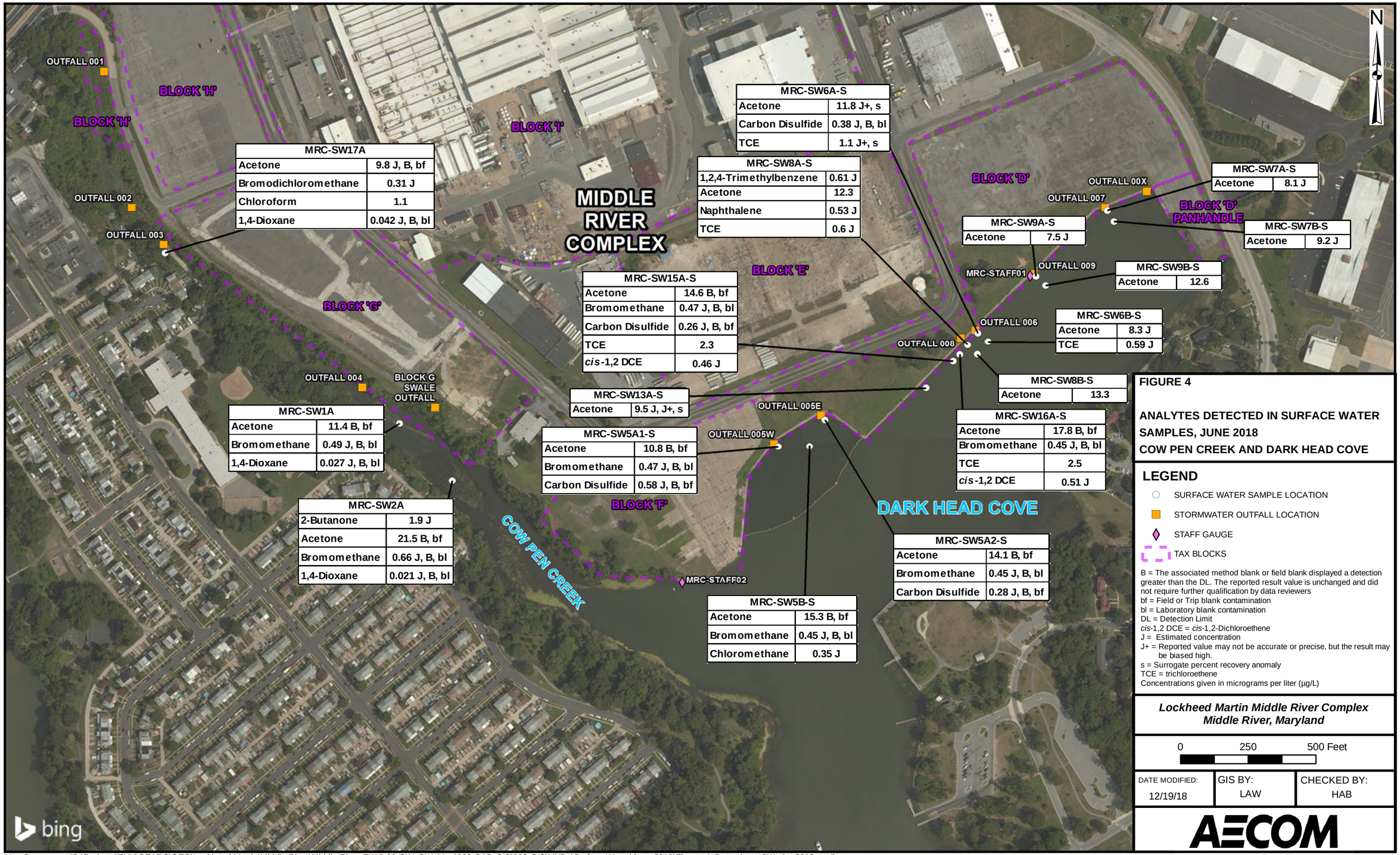
Lockheed Martin Middle River Complex
Middle River, Maryland

0 250 500 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
12/10/18	LAW	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\June 2018\Figure_3_SW_Sample_Locs_Jun2018.mxd)
CREDITS: Aerial Imagery, Microsoft Bing Maps, 2018; Basemap, Tetra Tech, 2017



MRC-SW17A	
Acetone	9.8 J, B, bf
Bromodichloromethane	0.31 J
Chloroform	1.1
1,4-Dioxane	0.042 J, B, bl

MRC-SW6A-S	
Acetone	11.8 J+, s
Carbon Disulfide	0.38 J, B, bl
TCE	1.1 J+, s

MRC-SW8A-S	
1,2,4-Trimethylbenzene	0.61 J
Acetone	12.3
Naphthalene	0.53 J
TCE	0.6 J

MRC-SW7A-S	
Acetone	8.1 J

MRC-SW9A-S	
Acetone	7.5 J

MRC-SW7B-S	
Acetone	9.2 J

MRC-SW9B-S	
Acetone	12.6

MRC-SW15A-S	
Acetone	14.6 B, bf
Bromomethane	0.47 J, B, bl
Carbon Disulfide	0.26 J, B, bf
TCE	2.3
cis-1,2 DCE	0.46 J

MRC-SW6B-S	
Acetone	8.3 J
TCE	0.59 J

MRC-SW8B-S	
Acetone	13.3

MRC-SW13A-S	
Acetone	9.5 J, J+, s

MRC-SW1A	
Acetone	11.4 B, bf
Bromomethane	0.49 J, B, bl
1,4-Dioxane	0.027 J, B, bl

MRC-SW5A1-S	
Acetone	10.8 B, bf
Bromomethane	0.47 J, B, bl
Carbon Disulfide	0.58 J, B, bf

MRC-SW16A-S	
Acetone	17.8 B, bf
Bromomethane	0.45 J, B, bl
TCE	2.5
cis-1,2 DCE	0.51 J

MRC-SW2A	
2-Butanone	1.9 J
Acetone	21.5 B, bf
Bromomethane	0.66 J, B, bl
1,4-Dioxane	0.021 J, B, bl

MRC-SW5A2-S	
Acetone	14.1 B, bf
Bromomethane	0.45 J, B, bl
Carbon Disulfide	0.28 J, B, bf

MRC-SW5B-S	
Acetone	15.3 B, bf
Bromomethane	0.45 J, B, bl
Chloromethane	0.35 J

FIGURE 4

ANALYTES DETECTED IN SURFACE WATER SAMPLES, JUNE 2018
COW PEN CREEK AND DARK HEAD COVE

LEGEND

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

B = The associated method blank or field blank displayed a detection greater than the DL. The reported result value is unchanged and did not require further qualification by data reviewers
bf = Field or Trip blank contamination
bl = Laboratory blank contamination
DL = Detection Limit
cis-1,2 DCE = *cis*-1,2-Dichloroethene
J = Estimated concentration
J+ = Reported value may not be accurate or precise, but the result may be biased high.
s = Surrogate percent recovery anomaly
TCE = trichloroethene
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 250 500 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
12/19/18	LAW	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\June 2018\Figure_4_Detections_SW_Jun2018.mxd)
CREDITS: Aerial Imagery, Microsoft Bing Maps, 2018; Basemap, Tetra Tech, 2017

TABLES

TABLE 1

Surface Water Sampling Locations and Chemical Analyses, 2018 Only
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Sample location	Sample number	Distance from shore (in feet)	Samples per round	Analytical parameters (all samples)
Dark Head Cove				
Outfall 005E and 005W	MRC-SW5A1	10	1	VOCs, PCBs**
	MRC-SW5A2	10	1	field parameters
	MRC-SW5B	50	1	
Outfall 006	MRC-SW6A	10	1	VOCs, 1,4 Dioxane, PCBs**
	MRC-SW6B	50	1	field parameters
Outfall 007	MRC-SW7A	10	1	VOCs, PCBs**
	MRC-SW7B	50	1	field parameters
Outfall 008	MRC-SW8A	10	1	VOCs, 1,4 Dioxane, PCBs**
	MRC-SW8B	50	1	field parameters
Outfall 009	MRC-SW9A	10	1	VOCs, PCBs**
	MRC-SW9B	50	1	field parameters
Dark Head Cove	MRC-SW13A	10	1	VOCs, PCBs**
	MRC-SW15A	10	1	
	MRC-SW16A	10	1	field parameters
Cow Pen Creek				
Outfall 003	MRC-SW17A	downstream*	1	VOCs, 1,4-dioxane
Near western plume	MRC-SW1A	upstream*	1	
	MRC-SW2A	downstream*	1	field parameters

Notes:

Samples are to be collected in April, June and September each year

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

** PCB samples will be collected only in the April round, each year

All samples are to be collected one foot below the water surface

VOCs – volatile organic compounds by USEPA SW-846 Method 8260C

MRC - Middle River Complex

PCBs – polychlorinated biphenyl homologs by USEPA SW-846 Method 680

SW - Surface Water

1,4-Dioxane by USEPA SW-848270D SIM

USEPA – United States Environmental Protection Agency

Field parameters include pH, temperature, specific conductance, dissolved oxygen (DO), hardness, turbidity, oxidation-reduction potential (ORP), and salinity using calibrated portable field instruments (Horiba U-10 or equivalent) at the tin

Hardness analyses will require use of a field test kit (Hach, Chemetrics, or equivalent).

One trip blank shall be used and shipped for each cooler containing VOC samples. Trip blanks will be analyzed for the same VOC

One field duplicate will be collected and analyzed for each laboratory analytical parameter (i.e., VOCs, PCBs, 1,4-dioxane)

Table 2
Detected Analytes and Screening Level Exceedances in June 2018 Surface Water Samples
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 1 of 3

Analyte	CAS Number	National Recommended Water Quality Freshwater Acute	National Recommended Water Quality Freshwater Chronic	Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW1A 6/25/2018 Field Sample Result	LQ	VQ	RC	MRC-SW2A 6/25/2018 Field Sample Result	LQ	VQ	RC	MRC-SW5A1-S 6/25/2018 Field Sample Result	LQ	VQ	RC	MRC-SW5A2-S 6/25/2018 Field Sample Result	LQ	VQ	RC	MRC-SW5B-S 6/25/2018 Field Duplicate Result	LQ	VQ	RC	MRC-SW6A-S 6/25/2018 Field Sample Result	LQ	VQ	RC
VOLATILES (µg/L)																														
1,2,4-Trimethylbenzene	95-63-6	NE	NE	33	NE	NE	ND				ND				ND				ND				ND				ND			
2-Butanone	78-93-3	NE	NE	14000	NE	NE	ND				**1.9**	J			ND				ND				ND				ND			
Acetone	67-64-1	NE	NE	1500	NE	NE	**11.4**		B	bf	**21.5**		B	bf	**10.8**		B	bf	**14.1**		B	bf	**15.3**		B	bf	**11.8**		J+	s
Bromodichloromethane	75-27-4	NE	NE	NE	170	NE	ND				ND				ND				ND				ND				ND			
Bromomethane	74-83-9	NE	NE	NE	1500	NE	**0.49**	J	B	bl	**0.66**	J	B	bl	**0.47**	J	B	bl	**0.45**	J	B	bl	**0.45**	J	B	bl	ND			
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND				ND				**0.58**	J	B	bf	**0.28**	J	B	bf	ND				**0.38**	J	B	bl
Chloroform	67-66-3	NE	NE	1.8	4700	NE	ND				ND				ND				ND				ND				ND			
Chloromethane	74-87-3	NE	NE	NE	NE	NE	ND				ND				ND				ND				**0.35**	J			ND			
cis -1,2-Dichloroethene	156-59-2	NE	NE	590	NE	70	ND				ND				ND				ND				ND				ND			
Naphthalene	91-20-3	NE	NE	1.1	NE	NE	ND				ND				ND				ND				ND				ND			
Trichloroethene	79-01-6	NE	NE	21	300	30	ND				ND				ND				ND				ND				**1.1**		J+	s
SEMIVOLATILES (µg/L)																														
1,4-Dioxane	123-91-1	NE	NE	22000	NE	30	**0.03**	J	B	bl	**0.02**	J	B	bl	NS				NS				NS				ND			

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 $1x10^{-5}$

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

Definitions

LQ - Laboratory Qualifier
MRC - Middle River Complex
ND - not detected
NE - not established
NS - not sampled
RC - Reason Code
SW - surface water
VQ - Data Validation Qualifier
µg/L - micrograms per liter

Data Qualifiers and Reason Codes

J = Estimated concentration
J+ = Reported value may not be accurate or precise, but the result may be biased high.
B = The associated method blank or field blank displayed a detection greater than the DL. The reported result value is unchanged and did not require further qualification by data reviewers
bl = Laboratory blank contamination
bf = Field or Trip blank contamination
s = Surrogate percent recovery anomaly

Table 2
Detected Analytes and Screening Level Exceedances in June 2018 Surface Water Samples
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 2 of 3

Analyte	CAS Number	National Recommended Water Quality Freshwater		Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW6B-S 6/25/2018 Field Sample				MRC-SW7A-S 6/25/2018 Field Sample				MRC-SW7B-S 6/25/2018 Field Sample				MRC-SW8A-S 6/25/2018 Field Sample				MRC-SW8B-S 6/25/2018 Field Sample				MRC-SW9A-S 6/25/2018 Field Sample			
		Acute	Chronic				Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC
VOLATILES (µg/L)																														
1,2,4-Trimethylbenzene	95-63-6	NE	NE	33	NE	NE	ND				ND				ND				**0.61**	J			ND				ND			
2-Butanone	78-93-3	NE	NE	14000	NE	NE	ND				ND				ND				ND				ND				ND			
Acetone	67-64-1	NE	NE	1500	NE	NE	**8.3**	J			**8.1**	J			**9.2**	J			**12.3**				**13.3**				**7.5**	J		
Bromodichloromethane	75-27-4	NE	NE	NE	170	NE	ND				ND				ND				ND				ND				ND			
Bromomethane	74-83-9	NE	NE	NE	1500	NE	ND				ND				ND				ND				ND				ND			
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND				ND				ND				ND				ND				ND			
Chloroform	67-66-3	NE	NE	1.8	4700	NE	ND				ND				ND				ND				ND				ND			
Chloromethane	74-87-3	NE	NE	NE	NE	NE	ND				ND				ND				ND				ND				ND			
cis -1,2-Dichloroethene	156-59-2	NE	NE	590	NE	70	ND				ND				ND				ND				ND				ND			
Naphthalene	91-20-3	NE	NE	1.1	NE	NE	ND				ND				ND				**0.53**	J			ND				ND			
Trichloroethene	79-01-6	NE	NE	21	300	30	**0.59**	J			ND				ND				**0.6**	J			ND				ND			
SEMIVOLATILES (µg/L)																														
1,4-Dioxane	123-91-1	NE	NE	22000	NE	30	ND				ND				ND				ND				ND				ND			

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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Table 2
Detected Analytes and Screening Level Exceedances in June 2018 Surface Water Samples
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 3 of 3

Analyte	CAS Number	National Recommended Water Quality Freshwater		Ecological Surface Water Screening Level (2)	Human Health Consumption (Organism Only) (1) (3)	Swimming Screening Levels (4)	MRC-SW9B-S 6/25/2018 Field Sample				MRC-SW13A-S 6/25/2018 Field Sample				MRC-SW15A-S 6/25/2018 Field Sample				MRC-SW16A-S 6/25/2018 Field Sample				MRC-SW17A 6/26/2018 Field Sample				MRC-SW17A DUP 6/26/2018 Field Duplicate			
		Acute	Chronic				Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC	Result	LQ	VQ	RC
VOLATILES (µg/L)																														
1,2,4-Trimethylbenzene	95-63-6	NE	NE	33	NE	NE	ND				ND				ND				ND				ND				ND			
2-Butanone	78-93-3	NE	NE	14000	NE	NE	ND				ND				ND				ND				ND				ND			
Acetone	67-64-1	NE	NE	1500	NE	NE	**12.6**				**9.5**	J	J+	s	**14.6**		B	bf	**17.8**		B	bf	**7.4**	J	B	bf	**9.8**	J	B	Bf
Bromodichloromethane	75-27-4	NE	NE	NE	170	NE	ND				ND				ND				ND				**0.31**	J			**0.3**	J		
Bromomethane	74-83-9	NE	NE	NE	1500	NE	ND				ND				**0.47**	J	B	bl	**0.45**	J	B	bl	ND				ND			
Carbon Disulfide	75-15-0	NE	NE	0.92	NE	NE	ND				ND				**0.26**	J	B	bf	ND				ND				ND			
Chloroform	67-66-3	NE	NE	1.8	4700	NE	ND				ND				ND				ND				**1.1**				**1.1**			
Chloromethane	74-87-3	NE	NE	NE	NE	NE	ND				ND				ND				ND				ND				ND			
cis -1,2-Dichloroethene	156-59-2	NE	NE	590	NE	70	ND				ND				**0.46**	J			**0.51**	J			ND				ND			
Naphthalene	91-20-3	NE	NE	1.1	NE	NE	ND				ND				ND				ND				ND				ND			
Trichloroethene	79-01-6	NE	NE	21	300	30	ND				ND				**2.3**				**2.5**				ND				ND			
SEMIVOLATILES (µg/L)																														
1,4-Dioxane	123-91-1	NE	NE	22000	NE	30	ND				ND				ND				ND				**0.04**	J	B	bl	**0.04**	J	B	bl

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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bf = Field or Trip blank contamination
s = Surrogate percent recovery anomaly

Table 3
Field Measurements for Surface Water Quality, April 2018
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	6/25/2018	1542	27.19	8.27	1.814	20.8	10.32	161.5	2.5	402.5
MRC-SW2A	6/25/2018	1528	27.35	8.13	1.951	0.6	9.58	170.2	2.5	398.4
MRC-SW5A1-S	6/25/2018	1505	26.6	7.85	2.029	5.1	7.75	174.1	2.5	397.6
MRC-SW5A2-S	6/25/2018	1500	26.49	7.84	2.028	5.1	7.49	171.4	2.5	405.9
MRC-SW5B-S	6/25/2018	1513	26.61	7.97	2.031	5.5	8.34	172.8	2.5	403.6
MRC-SW6A-S	6/25/2018	1217	26.46	7.74	2.027	5.1	7.56	188.4	2.5	378.4
MRC-SW6B-S	6/25/2018	1232	26.51	7.71	2.034	5.4	8.15	192.9	2.5	400.2
MRC-SW7A-S	6/25/2018	1115	26.26	7.64	1.973	5	6.49	176.2	2.6	386.5
MRC-SW7B-S	6/25/2018	1129	26.08	7.41	2.014	6.3	7.69	197.1	2.5	410.8
MRC-SW8A-S	6/25/2018	1258	26.47	7.88	2.024	6.1	0.61	177.9	2.5	392.3
MRC-SW8B-S	6/25/2018	1304	26.43	7.76	2.027	5.5	7.8	173.2	2.5	415.1
MRC-SW9A-S	6/25/2018	1150	26.11	7.49	2.027	0.3	6.68	195.1	2.5	409.7
MRC-SW9B-S	6/25/2018	1205	26.28	7.67	2.027	5	7.7	205.1	2.6	389.9
MRC-SW13A-S	6/25/2018	1325	26.45	7.76	2.029	5	7.35	168.8	2.5	385.4
MRC-SW15A-S	6/25/2018	1442	26.64	7.92	2.028	0.5	7.82	170.8	2.5	401.5
MRC-SW16A-S	6/25/2018	1429	26.56	8.03	2.022	6.7	7.76	172	2.5	405.9
MRC-SW17A	6/26/2018	1036	21.42	7.14	0.635	6	8.38	192.7	0.3	402.8

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 trillion

APPENDICES

Appendix A—Distribution of 1,4-Dioxane in Groundwater, 2017

Appendix B—Surface Water Sampling Log Sheets

Appendix C—Data Validation Report

Appendix D—Laboratory Analytical Data

APPENDIX A
Distribution of 1,4-Dioxane in Groundwater, 2017

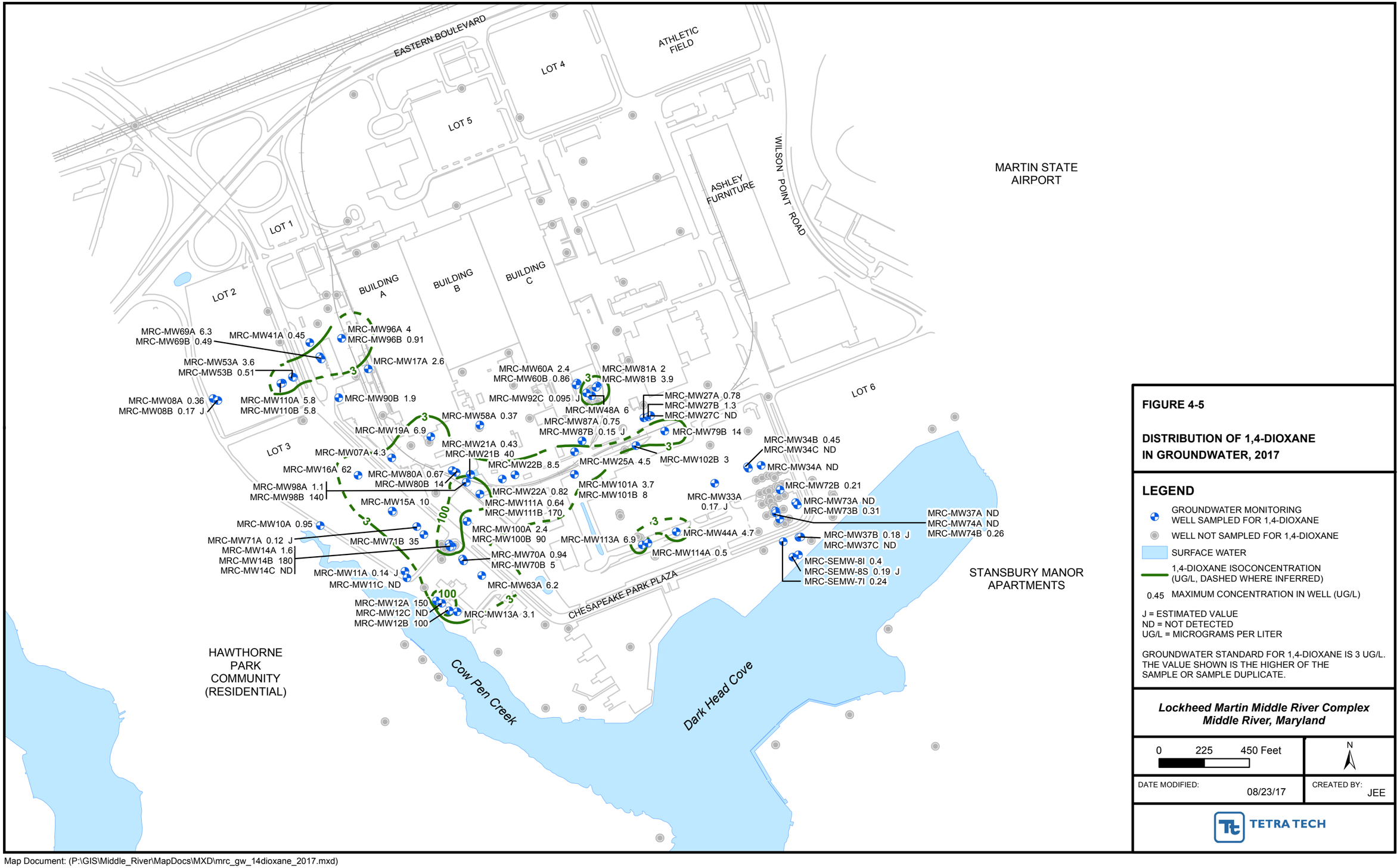


FIGURE 4-5

DISTRIBUTION OF 1,4-DIOXANE IN GROUNDWATER, 2017

LEGEND

- GROUNDWATER MONITORING WELL SAMPLED FOR 1,4-DIOXANE
- WELL NOT SAMPLED FOR 1,4-DIOXANE
- SURFACE WATER
- 1,4-DIOXANE ISOCONCENTRATION (UG/L, DASHED WHERE INFERRED)
- 0.45 MAXIMUM CONCENTRATION IN WELL (UG/L)

J = ESTIMATED VALUE
ND = NOT DETECTED
UG/L = MICROGRAMS PER LITER

GROUNDWATER STANDARD FOR 1,4-DIOXANE IS 3 UG/L. THE VALUE SHOWN IS THE HIGHER OF THE SAMPLE OR SAMPLE DUPLICATE.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 225 450 Feet

N

DATE MODIFIED: 08/23/17

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_gw_14dioxane_2017.mxd)
08/23/17 -- JEE

APPENDIX B
Surface Water Sampling Forms

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW1A 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

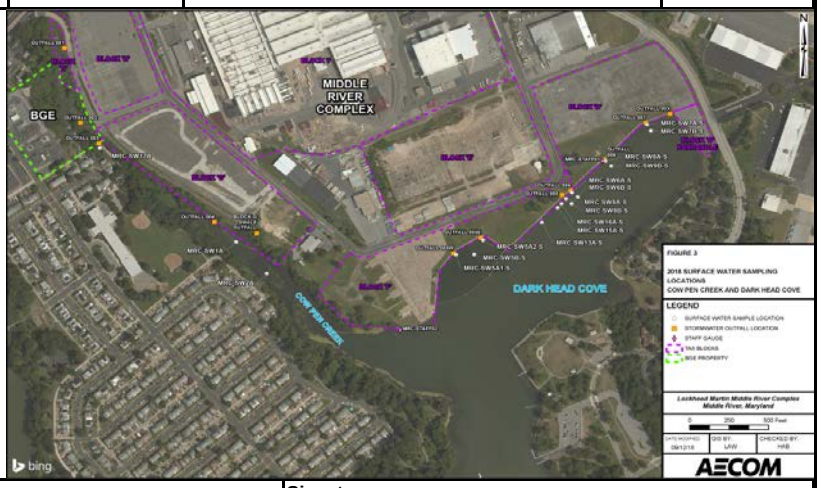
SAMPLING DATA:

Date: 06/25/2018 Time: 1542	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF02 1525: -0.4 feet 1600: -0.4 feet	**clear**	**8.27**	**1.814**	**27.19**	**20.8**	**10.32**	**2.5**	**161.5**

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:**	

Hardness (mg/L CaCO3) = 402.5



Circle if Applicable: N/A

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW2A 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: 06/25/2018 Time: 1528	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF02 1525: -0.4 feet 1600: -0.4 feet	**clear**	**8.13**	**1.951**	**27.35**	**0.6**	**9.58**	**2.5**	**170.2**

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:

Hardness (mg/L CaCO3) = 398.4

MAP:

Circle if Applicable: N/A

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW5A1-S Project No.: 60555202 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: 06/25/2018 Time: 1505	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.85**	**2.029**	**26.6**	**5.1**	**7.75**	**2.5**	**174.1**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 397.6

MAP:

Circle if Applicable: N/A

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 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: 06/25/2018 Time:	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.84**	**2.028**	**26.49**	**5.1**	**7.49**	**2.5**	**171.4**

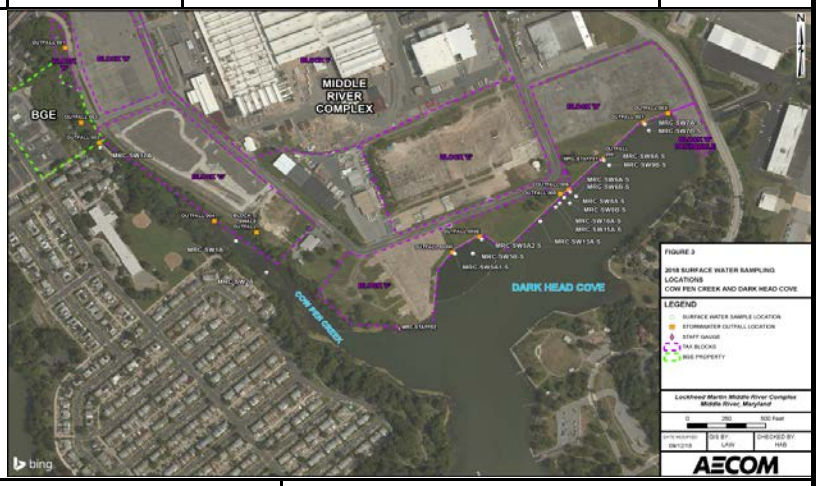
SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 405.9

MAP:



Circle if Applicable: N/A

MS/MSD

Duplicate ID:

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW5B-S Project No.: 60555202 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: 06/25/2018 Time: 1513	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.97**	**2.031**	**26.61**	**5.5**	**8.34**	**2.5**	**172.8**

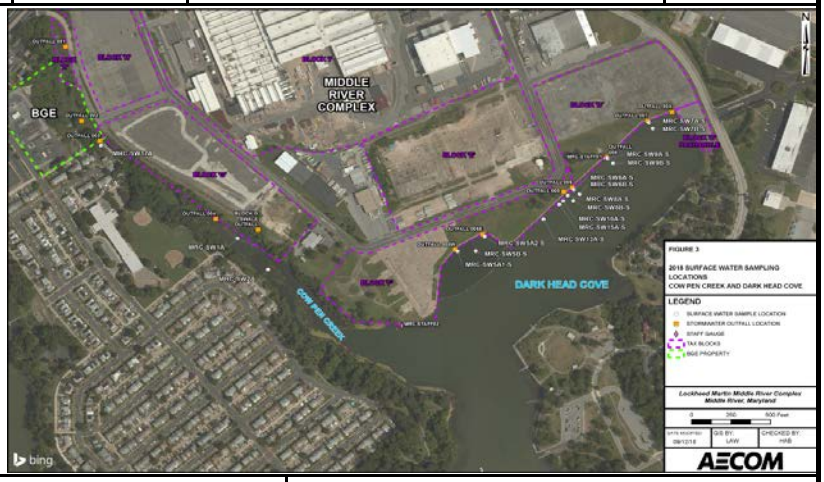
SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 403.6

MAP:



Circle if Applicable: N/A

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW6A-S Project No.: 60555202 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: 06/25/2018 Time: 1217	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.74**	**2.027**	**26.46**	**5.1**	**7.56**	**2.5**	**188.4**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (6020A/7470)	None	2 - 1000 mL ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	

Hardness (mg/L CaCO3) = 378.4

Circle if Applicable: N/A

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

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

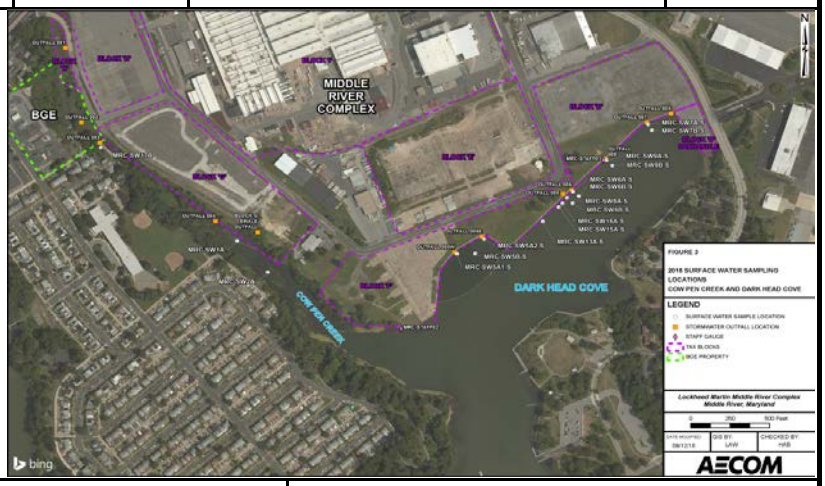
SAMPLING DATA:

Date: 06/25/2018 Time: 1232	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.71**	**2.034**	**26.51**	**5.4**	**8.15**	**2.5**	**192.9**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (6020A/7470)	None	2 - 1000 mL ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	

Hardness (mg/L CaCO3) = 400.2



Circle if Applicable: N/A

MS/MSD

Duplicate ID:

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW7A-S Project No.: 60555202 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: 06/25/2018 Time: 1115	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.64**	**1.973**	**26.26**	**5**	**6.49**	**2.6**	**176.2**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 386.5

MAP:

Circle if Applicable: N/A

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW7B-S Project No.: 60555202 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: 06/25/2018 Time: 1129	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.41**	**2.014**	**26.08**	**6.3**	**7.69**	2.5	**197.1**

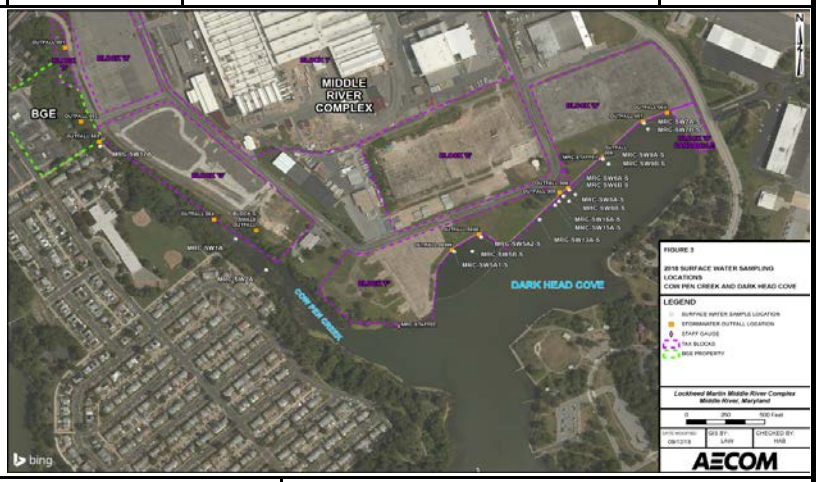
SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 410.8

MAP:



Circle if Applicable: N/A

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 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: 06/25/2018 Time: 1258	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.88**	**2.024**	**26.47**	**6.1**	**0.61**	**2.5**	**177.9**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (6020A/7470)	None	2 - 1000 mL ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	

Hardness (mg/L CaCO3) = 392.3

Circle if Applicable: N/A

MS/MSD

Duplicate ID:

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW8B-S Project No.: 60555202 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: 06/25/2018 Time: 1304	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.76**	**2.027**	**26.43**	**5.5**	**7.8**	**2.5**	**173.2**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes
1,4 Dioxane (6020A/7470)	None	2 - 1000 mL ambers	Yes
OBSERVATIONS / NOTES:		**MAP:**	

Hardness (mg/L CaCO3) = 415.1

Circle if Applicable: N/A

MS/MSD **Duplicate ID:**

Signature:

AECOM

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Lockheed Martin Corporation Middle River Complex Sample ID No.: MRC-SW9A-S Project No.: 60555202 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: 06/25/2018 Time: 1150	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.49**	**2.027**	**26.11**	**0.3**	**6.68**	**2.5**	**195.1**

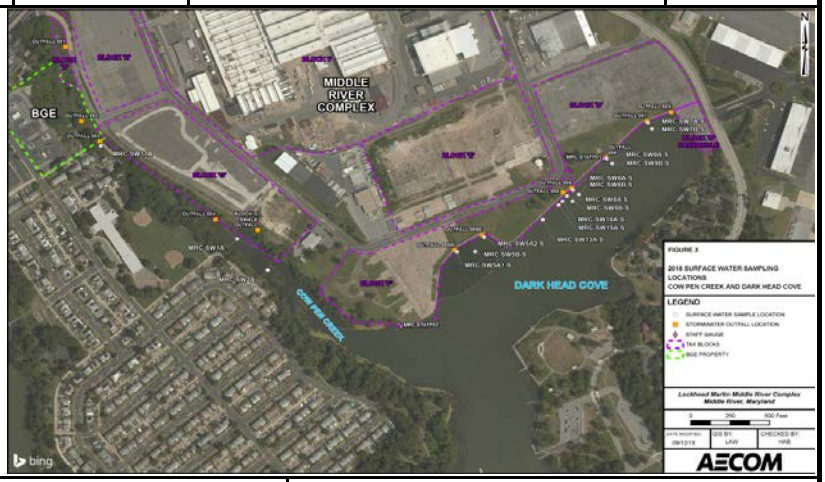
SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 409.7

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-SW9B-S Project No.: 60555202 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: 06/25/2018 Time: 1205	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.67**	**2.027**	**26.28**	**5**	**7.7**	**2.6**	**205.1**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 389.9

MAP:

Circle if Applicable: N/A

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 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: 06/25/2018 Time: 1325	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.76**	**2.029**	**26.45**	**5**	**7.35**	**2.5**	**168.8**

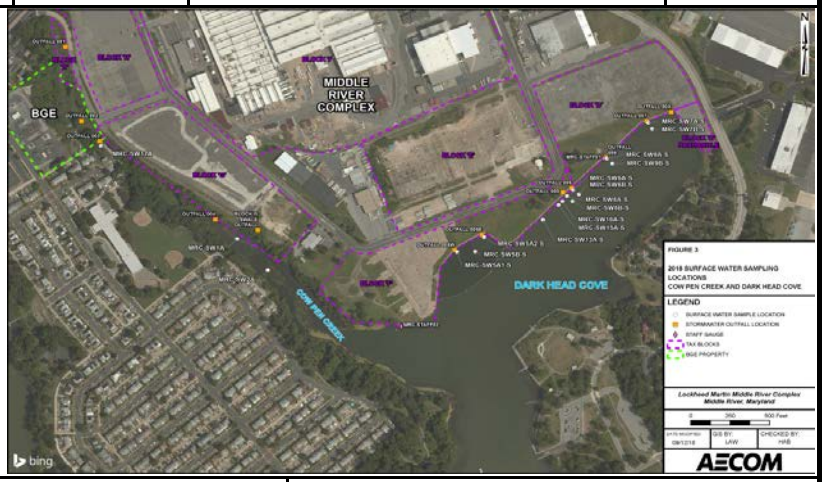
SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 385.4

MAP:



Circle if Applicable: N/A

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 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: 06/25/2018 Time: 1442	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**7.92**	**2.028**	**26.64**	**0.5**	**7.82**	**2.5**	**170.8**

SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 401.5

MAP:

Circle if Applicable: N/A

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 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:

Date: 06/25/2018 Time: 1429	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF01 1105: 0.0 feet 1500: -0.4 feet	**clear**	**8.03**	**2.022**	**26.56**	**6.7**	**7.76**	**2.5**	**172**

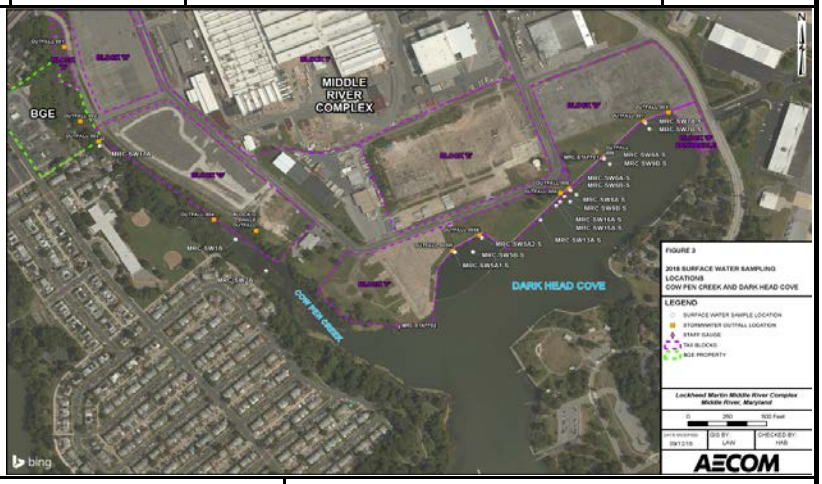
SAMPLE COLLECTION INFORMATION:

Analysis	**Preservative**	**Container Requirements**	**Collected**
VOCs (8260C)	HCl	2 - 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

Hardness (mg/L CaCO3) = 405.9

MAP:



Circle if Applicable: N/A

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 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

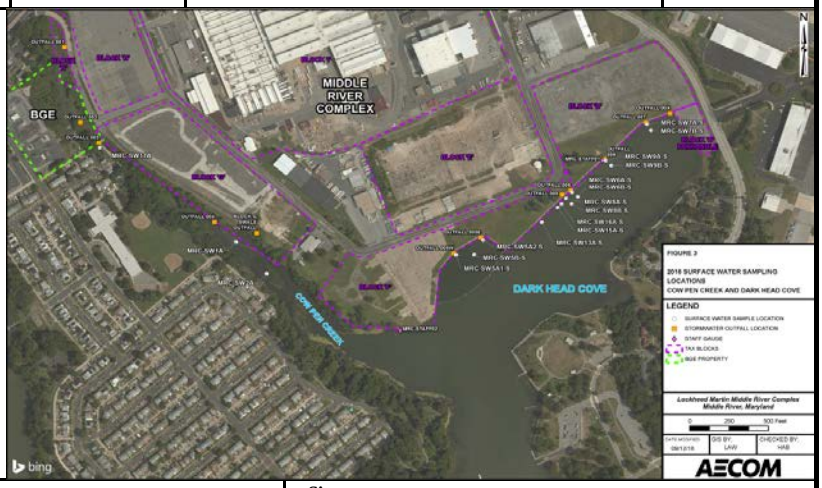
SAMPLING DATA:

Date: 06/26/2018 Time: 1036	**Color** (Visual)	**pH** (S.U.)	**S.C.** (mS/cm)	**Temp.** (°C)	**Turbidity** (NTU)	**DO** (mg/l)	**Salinity** (%)	**ORP** (mV)
Method: Grab Sample Depth: 1 ft below water surface Static Water Level: MRC-STAFF02 1525: -0.4 feet 1600: -0.4 feet	**clear**	**7.14**	**0.635**	**21.42**	**6**	**8.38**	**0.3**	**192.7**

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:**	

Hardness (mg/L CaCO3) = 402.8



Circle if Applicable:

MS/MSD:	**Duplicate ID:**
Yes	**MRC-SW17A-DUP**

Signature:

APPENDIX C
Data Validation Report

Data Validation and Usability Report

June 2018 – Triannual Surface Water Sampling

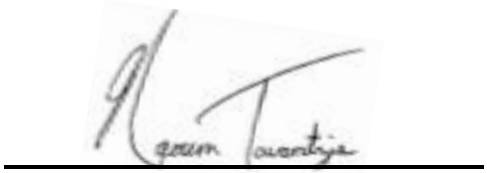
Lockheed Martin
Middle River Complex

Project: 60555202.8
August 2018

IDENTIFICATION FORM

Data Validation and Data Usability Review

Zachary Neigh
Data Validator
AECOM
July 30, 2018



Naoum Tavantzis
Project Chemist
AECOM
July 30, 2018

Table of Contents

I. Executive Summary

Data validation was performed on 100% of the surface water field investigative samples collected on April 25th, 2018 and April 26th, 2018 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 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 through the use of 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 this process include 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), as well as 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. All QC anomalies were assessed for their impact on data quality in regards 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 with the field duplicate relative percent differences; laboratory precision is measured with laboratory duplicate relative percent differences and/or laboratory control spike and matrix spike duplicate relative percent differences. All quality control criteria impacting precision were met for the data reviewed.

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. Accuracy in the field was monitored through the use of negative controls such as trip blanks, field blanks, and equipment blanks, along with adherence to the standard operating procedures and sampling plans. 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).

Several method blanks, trip blanks, equipment blanks, and field blanks displayed detections greater than the method detection limit. Per the USEPA Region III guidelines on the qualification of blank detections, associated field sample results that displayed concentrations within five times of the blank detection were qualified “B”. The qualified field sample results should be considered usable as estimated values.

During the review, the MS/MSD performed on parent sample MRC-SW17A displayed percent recoveries less than the lower quality control limits, and less than the rejection limit of 20%. The associated parent sample results were non-detect and were qualified R,m. These anomalies are considered major and the “R” qualified field sample results should be considered unusable.

Several LCS/LCSD displayed percent recoveries greater than the quality control limits. The positive associated field sample results were qualified J,l. These anomalies are considered minor and the qualified field sample results should be considered usable as estimated values.

The surrogate spikes performed on samples MRC-SW13A, MRC-SW6B, and TB-062518 displayed percent recoveries greater than the upper QC limits for 4-bromoflurobenzene. The positive associated field sample results were qualified J+,s unless previously qualified due to a LCS percent recovery anomaly. These surrogate anomalies are considered minor and the qualified field sample results should be considered usable as estimated values with a positive bias.

Representativeness

Representativeness qualitatively expresses 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. All quality control criteria impacting representativeness were met for the data reviewed.

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.

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 19 samples were validated, including 17 surface water samples and two trip blanks. Due to rejected data points associated with major anomalies, the overall data completeness was less than 100% at 99%.

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. Any 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

The bulk of the data was considered usable and met the completeness requirement outlined in the QAPP. During the course of the data validation, several minor anomalies were noted which is to be anticipated based on statistical predictability of standard analytical procedures. Several field sample results were qualified due to these minor anomalies. A limited number of major

anomalies were identified over the course of data validation with minimal impact on overall data quality. The overall completeness of the data reviewed was acceptable at 99%. Except for those flagged “R”, all 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 Blanks	**Detection > MDL**	2769175	Chloroform	0.42 ug/L (0.21 ug/L)
		2769175	Hexachloro-1,3-Butadiene	4.4 ug/L (1.0 ug/L)
		2770157	Carbon Disulfide	0.32 ug/L (0.23 ug/L)
		2770858	Hexachloro-1,3-Butadiene	2.3 ug/L (1.0 ug/L)
		2770696	Bromomethane	0.46 ug/L (0.39 ug/L)
Trip Blanks	**Detection > MDL**	TB-062618	1,4-Dichlorobenzene	0.45 ug/L (0.27 ug/L)
		TB-062619	Chlorobenzene	0.24 ug/L (0.19 ug/L)
		TB-062620	1,3-Dichlorobenzene	0.37 ug/L (0.25 ug/L)
		TB-062621	Acetone	8.5 ug/L (3.1 ug/L)
		TB-062622	Bromomethane	0.54 ug/L (0.39 ug/L)
		TB-062623	Carbon Disulfide	0.58 ug/L (0.23 ug/L)
		TB-062624	Naphthalene	0.66 ug/L (0.34 ug/L)
LCS/LCSD	**LCS % Recovery**	2769176	Hexachloro-1,3-Butadiene	146 % (55-128 %)
		2770697	CYCLOHEXANE	132 % (66-130 %)
		2770697	Tetrachloroethene	127 % (72-124 %)
		2770697	1,2-Dichloroethylene (total)	126 % (78-125 %)
		2770697	1,1-Dichloroethylene	147 % (63-128 %)
		2724403	Methylene Chloride	136 % (76-121 %)
		2724800	1,1-Dichloroethylene	135 % (63-128 %)
		2724800	Carbon Disulfide	148 % (57-131 %)
		2724800	CYCLOHEXANE	133 % (66-130 %)
MS/MSD	**MS % Recovery**	MRC-SW17A	2-Chloroethylvinylether	0.5 % (1-150%)
MS/MSD	**RPD**	MRC-SW17A	Methyl acetate	22 % (20 %)
Surrogate Spike	**% Recovery**	MRC-SW13A	4-Bromofluorobenzene	117 % (79-114 %)
		MRC-SW6B	4-Bromofluorobenzene	129 % (79-114 %)
Laboratory Duplicates	No Anomalies			
Field Duplicates	No Anomalies			

1,4-Dioxane SW846-8270D-SIM	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	**Detection > MDL**	2766541	1,4-Dioxane	0.029 ug/L (0.019 ug/L)
Field/Equipment Blanks	*No Anomalies*			
LCS/LCSD	*No Anomalies*			

1,4-Dioxane

SW846-8270D-SIM	Description	Sample ID	Analyte	Value (Control Limit)
MS/MSD	*No Anomalies*			
Surrogate Spike	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*No Anomalies*			

IV. Qualified Field Sample Results

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
MRC-SW17A	SW8260B	2-Chloroethylvinylether	2	ug/l	**R**	**m**
MRC-SW17A	SW8260B	2-Chloroethylvinylether	2	ug/l	**R**	**m**
MRC-SW17A	SW8270D-SIM	1,4-Dioxane	0.042	ug/l	**B**	**bl**
MRC-SW17A	SW8270D-SIM	1,4-Dioxane	0.037	ug/l	**B**	**bl**
MRC-SW13A	SW8260B	Acetone	9.5	ug/l	**J+**	**s**
MRC-SW15A	SW8260B	1,2-Dichloroethylene (total)	0.46	ug/l	**J**	**l**
MRC-SW15A	SW8260B	Acetone	14.6	ug/l	**B**	**bf**
MRC-SW15A	SW8260B	Bromomethane	0.47	ug/l	**B**	**bl**
MRC-SW15A	SW8260B	Carbon Disulfide	0.26	ug/l	**B**	**bf**
MRC-SW16A	SW8260B	1,2-Dichloroethylene (total)	0.51	ug/l	**J**	**l**
MRC-SW16A	SW8260B	Acetone	17.8	ug/l	**B**	**bf**
MRC-SW16A	SW8260B	Bromomethane	0.45	ug/l	**B**	**bl**
MRC-SW1A	SW8260B	Acetone	11.4	ug/l	**B**	**bf**
MRC-SW1A	SW8260B	Bromomethane	0.49	ug/l	**B**	**bl**
MRC-SW1A	SW8270D-SIM	1,4-Dioxane	0.027	ug/l	**B**	**bl**
MRC-SW2A	SW8260B	Acetone	21.5	ug/l	**B**	**bf**
MRC-SW2A	SW8260B	Bromomethane	0.66	ug/l	**B**	**bl**
MRC-SW2A	SW8270D-SIM	1,4-Dioxane	0.021	ug/l	**B**	**bl**
MRC-SW5A1	SW8260B	Acetone	10.8	ug/l	**B**	**bf**
MRC-SW5A1	SW8260B	Bromomethane	0.47	ug/l	**B**	**bl**
MRC-SW5A1	SW8260B	Carbon Disulfide	0.58	ug/l	**B**	**bf**
MRC-SW5A2	SW8260B	Acetone	14.1	ug/l	**B**	**bf**
MRC-SW5A2	SW8260B	Bromomethane	0.45	ug/l	**B**	**bl**
MRC-SW5A2	SW8260B	Carbon Disulfide	0.28	ug/l	**B**	**bf**
MRC-SW5B	SW8260B	Acetone	15.3	ug/l	**B**	**bf**
MRC-SW5B	SW8260B	Bromomethane	0.45	ug/l	**B**	**bl**
MRC-SW6A	SW8260B	Acetone	11.8	ug/l	**J+**	**s**
MRC-SW6A	SW8260B	Carbon Disulfide	0.38	ug/l	**B**	**bl**
MRC-SW6A	SW8260B	TRICHLOROETHENE	1.1	ug/l	**J+**	**s**
TB-062518	SW8260B	Hexachloro-1,3-Butadiene	1.7	ug/l	**J**	**l**
TB-062518	SW8260B	Carbon Disulfide	0.31	ug/L	**J+**	**s**
TB-062518	SW8260B	Acetone	9.0	ug/L	**J+**	**s**
TB-062618	SW8260B	Bromomethane	0.54	ug/l	**B**	**bl**

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 (August 2014) Data Review and the USEPA Region III Guidelines for Organic (September 1994) for blank qualifications only.

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.
B	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	This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.

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*
a	Tracer recovery (radiochemical data only)
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing Blank Information
c	Calibration issue
cl	Clean-up standard recovery
cp	Insufficient in growth (radiochemical data only)
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
e	Ether interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
pe	Post Extraction Spike
q	Quantitation issue
r	Dual column RPD
rp	Re-extraction precision issue [PAHs only]

APPENDIX D
Laboratory Analytical Reports

ALS Environmental

34 Dogwood Lane ▪ 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: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 9, 2018

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

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2322628**
Purchase Order:	**95840ACM**	Workorder ID:	**ALG001|LMC MRC 06/25/18**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Monday, June 25, 2018.

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. Ravi Damera , Ms. Victoria Kirkpatrick , 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

34 Dogwood Lane ▪ 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: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2322628002	MRC-SW6B	Water	6/25/2018 12:35	6/25/2018 22:40	Ms. Victoria
2322628003	MRC-SW13A	Water	6/25/2018 13:25	6/25/2018 22:40	Ms. Victoria
2322628004	MRC-SW8A	Water	6/25/2018 12:50	6/25/2018 22:40	Ms. Victoria
2322628005	MRC-SW8B	Water	6/25/2018 13:05	6/25/2018 22:40	Ms. Victoria
2322628006	MRC-SW7B	Water	6/25/2018 11:35	6/25/2018 22:40	Ms. Victoria
2322628007	MRC-SW9B	Water	6/25/2018 12:05	6/25/2018 22:40	Ms. Victoria
2322628008	MRC-SW7A	Water	6/25/2018 11:20	6/25/2018 22:40	Ms. Victoria
2322628009	MRC-SW9A	Water	6/25/2018 11:50	6/25/2018 22:40	Ms. Victoria
2322628010	MRC-SW6A	Water	6/25/2018 12:20	6/25/2018 22:40	Ms. Victoria
2322628012	TB-062518	Water	6/25/2018 22:40	6/25/2018 22:40	Ms. Victoria

ALS Environmental

34 Dogwood Lane ▪ 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: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2322628 ALG001|LMC MRC 06/25/18

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 incurbator and the "Analyzed" value is the date/time out the incubator.

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

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628002** Date Collected: 6/25/2018 12:35 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:11	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:11	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:11	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:11	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:11	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/4/18 07:11	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:11	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 07:11	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:11	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:11	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:11	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 07:11	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:11	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 07:11	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 07:11	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 07:11	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 07:11	PDK	A
Acetone	8.3J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 07:11	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:11	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:11	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 07:11	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 07:11	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:11	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:11	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:11	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628002** Date Collected: 6/25/2018 12:35 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 07:11	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:11	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:11	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:11	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:11	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:11	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/4/18 07:11	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:11	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:11	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:11	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/4/18 07:11	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:11	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:11	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:11	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 07:11	PDK	A
Trichloroethene	0.59J	J	ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:11	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 07:11	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:11	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 07:11	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:11	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:11	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 07:11	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 07:11	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/4/18 07:11	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628002** Date Collected: 6/25/2018 12:35 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/4/18 07:11	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 07:11	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	121		%	62 - 133		SW846 8260B			7/4/18 07:11	PDK	A
4-Bromofluorobenzene (S)	129	1	%	79 - 114		SW846 8260B			7/4/18 07:11	PDK	A
Dibromofluoromethane (S)	97.1		%	78 - 116		SW846 8260B			7/4/18 07:11	PDK	A
Toluene-d8 (S)	96.4		%	76 - 127		SW846 8260B			7/4/18 07:11	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	38.8		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Fluoranthene-d10 (S)	96.3		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628003** Date Collected: 6/25/2018 13:25 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:33	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:33	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:33	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:33	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:33	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/4/18 07:33	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:33	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 07:33	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:33	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:33	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:33	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 07:33	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:33	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 07:33	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 07:33	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 07:33	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 07:33	PDK	A
Acetone	9.5J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 07:33	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:33	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:33	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 07:33	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 07:33	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:33	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:33	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:33	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628003** Date Collected: 6/25/2018 13:25 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 07:33	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:33	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:33	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:33	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:33	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:33	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/4/18 07:33	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:33	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:33	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:33	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/4/18 07:33	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:33	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:33	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:33	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 07:33	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:33	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 07:33	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:33	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 07:33	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:33	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:33	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 07:33	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 07:33	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/4/18 07:33	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628003** Date Collected: 6/25/2018 13:25 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/4/18 07:33	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 07:33	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	120		%	62 - 133		SW846 8260B			7/4/18 07:33	PDK	A
4-Bromofluorobenzene (S)	117	1	%	79 - 114		SW846 8260B			7/4/18 07:33	PDK	A
Dibromofluoromethane (S)	95.1		%	78 - 116		SW846 8260B			7/4/18 07:33	PDK	A
Toluene-d8 (S)	95.9		%	76 - 127		SW846 8260B			7/4/18 07:33	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	35.9		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Fluoranthene-d10 (S)	85.6		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628004** Date Collected: 6/25/2018 12:50 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:50	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:50	TMP	A
1,2,4-Trimethylbenzene	0.61J	J	ug/L	1.0	0.25	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:50	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:50	TMP	A
Acetone	12.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:50	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:50	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:50	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:50	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628004** Date Collected: 6/25/2018 12:50 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:50	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:50	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:50	TMP	A
Naphthalene	0.53J	J	ug/L	2.0	0.34	SW846 8260B		7/6/18 17:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:50	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:50	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:50	TMP	A
Trichloroethene	0.60J	J	ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:50	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:50	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:50	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:50	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628004** Date Collected: 6/25/2018 12:50 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93		%	62 - 133		SW846 8260B			7/6/18 17:50	TMP	A
4-Bromofluorobenzene (S)	91.3		%	79 - 114		SW846 8260B			7/6/18 17:50	TMP	A
Dibromofluoromethane (S)	81.8		%	78 - 116		SW846 8260B			7/6/18 17:50	TMP	A
Toluene-d8 (S)	96.5		%	76 - 127		SW846 8260B			7/6/18 17:50	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.095	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	42.6		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Fluoranthene-d10 (S)	78.6		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628005** Date Collected: 6/25/2018 13:05 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:12	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:12	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:12	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:12	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:12	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 18:12	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:12	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 18:12	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:12	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:12	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:12	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 18:12	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:12	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 18:12	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 18:12	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 18:12	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 18:12	TMP	A
Acetone	13.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 18:12	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:12	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:12	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 18:12	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 18:12	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:12	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:12	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:12	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628005** Date Collected: 6/25/2018 13:05 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 18:12	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:12	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:12	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:12	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:12	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:12	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 18:12	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:12	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:12	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:12	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 18:12	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:12	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:12	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:12	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 18:12	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:12	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 18:12	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:12	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 18:12	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:12	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:12	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 18:12	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 18:12	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 18:12	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628005** Date Collected: 6/25/2018 13:05 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 18:12	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 18:12	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133		SW846 8260B			7/6/18 18:12	TMP	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260B			7/6/18 18:12	TMP	A
Dibromofluoromethane (S)	81.9		%	78 - 116		SW846 8260B			7/6/18 18:12	TMP	A
Toluene-d8 (S)	91.1		%	76 - 127		SW846 8260B			7/6/18 18:12	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	43.7		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Fluoranthene-d10 (S)	81.7		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628006** Date Collected: 6/25/2018 11:35 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:34	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:34	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:34	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:34	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:34	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 18:34	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:34	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 18:34	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:34	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:34	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:34	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 18:34	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:34	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 18:34	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 18:34	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 18:34	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 18:34	TMP	A
Acetone	9.2J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 18:34	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:34	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:34	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 18:34	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 18:34	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:34	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:34	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:34	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628006** Date Collected: 6/25/2018 11:35 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 18:34	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:34	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:34	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:34	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:34	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:34	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 18:34	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:34	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:34	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:34	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 18:34	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:34	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:34	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:34	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 18:34	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:34	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 18:34	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:34	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 18:34	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:34	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:34	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 18:34	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 18:34	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 18:34	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628006** Date Collected: 6/25/2018 11:35 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 18:34	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 18:34	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133		SW846 8260B			7/6/18 18:34	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114		SW846 8260B			7/6/18 18:34	TMP	A
Dibromofluoromethane (S)	81.9		%	78 - 116		SW846 8260B			7/6/18 18:34	TMP	A
Toluene-d8 (S)	90.5		%	76 - 127		SW846 8260B			7/6/18 18:34	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	43.6		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Fluoranthene-d10 (S)	85.7		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628007** Date Collected: 6/25/2018 12:05 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:56	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:56	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:56	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:56	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:56	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 18:56	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:56	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 18:56	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:56	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:56	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:56	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 18:56	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:56	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 18:56	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 18:56	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 18:56	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 18:56	TMP	A
Acetone	12.6		ug/L	10.0	3.1	SW846 8260B		7/6/18 18:56	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:56	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:56	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 18:56	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 18:56	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:56	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:56	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:56	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628007** Date Collected: 6/25/2018 12:05 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 18:56	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:56	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:56	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:56	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:56	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:56	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 18:56	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:56	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:56	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:56	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 18:56	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:56	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:56	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:56	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 18:56	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:56	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 18:56	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:56	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 18:56	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:56	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:56	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 18:56	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 18:56	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 18:56	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628007** Date Collected: 6/25/2018 12:05 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 18:56	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 18:56	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.3		%	62 - 133		SW846 8260B			7/6/18 18:56	TMP	A
4-Bromofluorobenzene (S)	87.7		%	79 - 114		SW846 8260B			7/6/18 18:56	TMP	A
Dibromofluoromethane (S)	82.2		%	78 - 116		SW846 8260B			7/6/18 18:56	TMP	A
Toluene-d8 (S)	90.9		%	76 - 127		SW846 8260B			7/6/18 18:56	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.096	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	44.1		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Fluoranthene-d10 (S)	84.7		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628008** Date Collected: 6/25/2018 11:20 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:18	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:18	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:18	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:18	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:18	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:18	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:18	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:18	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:18	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:18	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:18	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:18	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:18	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:18	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:18	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:18	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:18	TMP	A
Acetone	8.1J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 19:18	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:18	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:18	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:18	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 19:18	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:18	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:18	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:18	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628008** Date Collected: 6/25/2018 11:20 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:18	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:18	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:18	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:18	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:18	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:18	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:18	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:18	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:18	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:18	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:18	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:18	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:18	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:18	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:18	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:18	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:18	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:18	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:18	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:18	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:18	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:18	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:18	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:18	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628008** Date Collected: 6/25/2018 11:20 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:18	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:18	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95.4		%	62 - 133		SW846 8260B			7/6/18 19:18	TMP	A
4-Bromofluorobenzene (S)	95.8		%	79 - 114		SW846 8260B			7/6/18 19:18	TMP	A
Dibromofluoromethane (S)	83.9		%	78 - 116		SW846 8260B			7/6/18 19:18	TMP	A
Toluene-d8 (S)	94.9		%	76 - 127		SW846 8260B			7/6/18 19:18	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46.7		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Fluoranthene-d10 (S)	86.4		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628009** Date Collected: 6/25/2018 11:50 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:39	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:39	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:39	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:39	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:39	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:39	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:39	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:39	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:39	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:39	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:39	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:39	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:39	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:39	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:39	TMP	A
Acetone	7.5J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 19:39	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:39	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:39	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:39	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 19:39	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:39	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:39	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:39	TMP	A

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628009** Date Collected: 6/25/2018 11:50 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:39	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:39	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:39	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:39	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:39	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:39	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:39	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:39	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:39	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:39	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:39	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:39	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:39	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:39	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:39	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:39	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:39	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:39	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:39	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:39	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:39	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628009** Date Collected: 6/25/2018 11:50 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:39	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:39	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.5		%	62 - 133		SW846 8260B			7/6/18 19:39	TMP	A
4-Bromofluorobenzene (S)	93.6		%	79 - 114		SW846 8260B			7/6/18 19:39	TMP	A
Dibromofluoromethane (S)	84.3		%	78 - 116		SW846 8260B			7/6/18 19:39	TMP	A
Toluene-d8 (S)	87.5		%	76 - 127		SW846 8260B			7/6/18 19:39	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.099	0.019	8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.7		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Fluoranthene-d10 (S)	91.5		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628010** Date Collected: 6/25/2018 12:20 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:21	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:21	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:21	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:21	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:21	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:21	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:21	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:21	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:21	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:21	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:21	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:21	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:21	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:21	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:21	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:21	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:21	TMP	A
Acetone	11.8		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:21	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:21	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:21	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:21	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:21	TMP	A
Carbon Disulfide	0.38J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:21	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:21	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:21	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628010** Date Collected: 6/25/2018 12:20 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:21	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:21	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:21	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:21	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:21	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:21	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:21	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:21	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:21	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:21	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:21	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:21	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:21	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:21	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:21	TMP	A
Trichloroethene	1.1		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:21	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:21	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:21	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:21	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:21	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:21	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:21	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:21	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:21	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628010** Date Collected: 6/25/2018 12:20 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:21	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:21	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			7/6/18 17:21	TMP	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260B			7/6/18 17:21	TMP	A
Dibromofluoromethane (S)	99.3		%	78 - 116		SW846 8260B			7/6/18 17:21	TMP	A
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B			7/6/18 17:21	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	59.2		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Fluoranthene-d10 (S)	87.4		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628012** Date Collected: 6/25/2018 22:40 Matrix: Water

Sample ID: **TB-062518** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 04:37	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 04:37	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 04:37	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 04:37	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 04:37	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/4/18 04:37	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 04:37	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 04:37	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 04:37	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 04:37	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 04:37	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 04:37	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 04:37	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 04:37	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 04:37	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 04:37	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 04:37	PDK	A
Acetone	9.0J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 04:37	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 04:37	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 04:37	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 04:37	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 04:37	PDK	A
Carbon Disulfide	0.31J	J	ug/L	1.0	0.23	SW846 8260B		7/4/18 04:37	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 04:37	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 04:37	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628012** Date Collected: 6/25/2018 22:40 Matrix: Water

Sample ID: **TB-062518** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 04:37	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 04:37	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 04:37	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 04:37	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 04:37	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 04:37	PDK	A
Hexachlorobutadiene	1.7J	J,2	ug/L	5.0	1.0	SW846 8260B		7/4/18 04:37	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 04:37	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 04:37	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 04:37	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/4/18 04:37	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 04:37	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 04:37	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 04:37	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 04:37	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 04:37	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 04:37	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 04:37	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 04:37	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 04:37	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 04:37	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 04:37	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 04:37	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/4/18 04:37	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628012** Date Collected: 6/25/2018 22:40 Matrix: Water

Sample ID: **TB-062518** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/4/18 04:37	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 04:37	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	121		%	62 - 133		SW846 8260B			7/4/18 04:37	PDK	A
4-Bromofluorobenzene (S)	142	1	%	79 - 114		SW846 8260B			7/4/18 04:37	PDK	A
Dibromofluoromethane (S)	93.7		%	78 - 116		SW846 8260B			7/4/18 04:37	PDK	A
Toluene-d8 (S)	94.3		%	76 - 127		SW846 8260B			7/4/18 04:37	PDK	A

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Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2322628001	1	MRC-SW13B	SW846 8260B	Trichlorofluoromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 126 and the control limits were 38 to 123.				
2322628001	2	MRC-SW13B	SW846 8260B	Trichlorofluoromethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 124 and the control limits were 38 to 123.				
2322628001	3	MRC-SW13B	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.				
2322628001	4	MRC-SW13B	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 148 and the control limits were 50 to 130.				
2322628001	5	MRC-SW13B	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 143 and the control limits were 50 to 130.				
2322628001	6	MRC-SW13B	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 126 and the control limits were 71 to 122.				
2322628001	7	MRC-SW13B	SW846 8260B	2,2-Dichloropropane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 140 and the control limits were 64 to 129.				
2322628001	8	MRC-SW13B	SW846 8260B	2,2-Dichloropropane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 138 and the control limits were 64 to 129.				
2322628001	9	MRC-SW13B	SW846 8260B	Ethylbenzene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Ethylbenzene. The % Recovery was reported as 125 and the control limits were 80 to 124.				
2322628001	10	MRC-SW13B	SW846 8260B	1,3-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,3-Dichlorobenzene. The % Recovery was reported as 123 and the control limits were 81 to 118.				
2322628001	11	MRC-SW13B	SW846 8260B	1,4-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,4-Dichlorobenzene. The % Recovery was reported as 118 and the control limits were 81 to 116.				
2322628001	12	MRC-SW13B	SW846 8260B	1,2-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2-Dichlorobenzene. The % Recovery was reported as 119 and the control limits were 82 to 118.				
2322628001	13	MRC-SW13B	SW846 8260B	Naphthalene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 49.1 and the control limits were 56 to 134.				
2322628001	14	MRC-SW13B	SW846 8260B	Hexachlorobutadiene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 147 and the control limits were 55 to 128.				

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

2322628001	15	MRC-SW13B	SW846 8260B	Hexachlorobutadiene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.

2322628001	16	MRC-SW13B	SW846 8260B	1,2,3-Trichlorobenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 55.9 and the control limits were 61 to 126.

2322628001	17	MRC-SW13B	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 141 and the control limits were 70 to 130.

2322628001	18	MRC-SW13B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 145 and the control limits were 70 to 130.

2322628001	19	MRC-SW13B	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 138 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628002	1	MRC-SW6B	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 129 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628003	1	MRC-SW13A	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 117 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628012	1	TB-062518	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 142 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628012	2	TB-062518	SW846 8260B	Hexachlorobutadiene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID	Sample ID	Analysis Method	Prep Method
2322628001	MRC-SW13B	8270 SIM	SW846 3510C
2322628001	MRC-SW13B	SW846 8260B	
2322628002	MRC-SW6B	8270 SIM	SW846 3510C
2322628002	MRC-SW6B	SW846 8260B	
2322628003	MRC-SW13A	8270 SIM	SW846 3510C
2322628003	MRC-SW13A	SW846 8260B	
2322628004	MRC-SW8A	8270 SIM	SW846 3510C
2322628004	MRC-SW8A	SW846 8260B	
2322628005	MRC-SW8B	8270 SIM	SW846 3510C
2322628005	MRC-SW8B	SW846 8260B	
2322628006	MRC-SW7B	8270 SIM	SW846 3510C
2322628006	MRC-SW7B	SW846 8260B	
2322628007	MRC-SW9B	8270 SIM	SW846 3510C
2322628007	MRC-SW9B	SW846 8260B	
2322628008	MRC-SW7A	8270 SIM	SW846 3510C
2322628008	MRC-SW7A	SW846 8260B	
2322628009	MRC-SW9A	8270 SIM	SW846 3510C
2322628009	MRC-SW9A	SW846 8260B	
2322628010	MRC-SW6A	8270 SIM	SW846 3510C
2322628010	MRC-SW6A	SW846 8260B	
2322628011	MRC-SW13BDUP	8270 SIM	SW846 3510C
2322628011	MRC-SW13BDUP	SW846 8260B	
2322628012	TB-062518	SW846 8260B	

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: EXTR/52730 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2322628001, 2322628002, 2322628003, 2322628004, 2322628005, 2322628006, 2322628007, 2322628008, 2322628009, 2322628010, 2322628011

METHOD BLANK: 2764660

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	60.7	%	29 - 112
Fluoranthene-d10 (S)	89.1	%	45 - 130

LABORATORY CONTROL SAMPLE: 2764661

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	40.3	ug/L	1	0.40	22 - 75
2-Methylnapthalene-d10 (S)	63	%			29 - 112
Fluoranthene-d10 (S)	86.7	%			45 - 130

MATRIX SPIKE: 2764662 DUPLICATE: 2764663 ORIGINAL: 2322628001

****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	0	ug/L	.93	.28017	.28111	30.1	30.1	22 - 75	.34	
2-Methylnapthalene-d10 (S)	52.2	%				52.2	49.4	29 - 112		
Fluoranthene-d10 (S)	83.9	%				83.9	81.1	45 - 130		

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: VOMS/47303 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2322628001, 2322628002, 2322628003, 2322628012

METHOD BLANK: 2769175

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
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

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Chloroform	0.42J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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	4.4J	ug/L	5.0
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	116	%	62 - 133
4-Bromofluorobenzene (S)	132	%	79 - 114
Dibromofluoromethane (S)	92.4	%	78 - 116
Toluene-d8 (S)	94.9	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

LABORATORY CONTROL SAMPLE: 2769176

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	114	ug/L	20	22.9	78 - 121
1,1,1-Trichloroethane	120	ug/L	20	24.1	66 - 130
1,1,2,2-Tetrachloroethane	109	ug/L	20	21.8	74 - 135
1,1,2-Trichloroethane	112	ug/L	20	22.3	82 - 126
1,1-Dichloroethane	114	ug/L	20	22.8	78 - 124
1,1-Dichloroethene	128	ug/L	20	25.6	63 - 128
1,2,3-Trichlorobenzene	75.5	ug/L	20	15.1	61 - 126
1,2,3-Trichloropropane	107	ug/L	20	21.4	75 - 132
1,2,4-Trichlorobenzene	92.2	ug/L	20	18.4	67 - 123
1,2,4-Trimethylbenzene	105	ug/L	20	21.0	76 - 125
1,2-Dibromo-3-chloropropane	97.9	ug/L	20	19.6	59 - 133
1,2-Dibromoethane	114	ug/L	20	22.8	80 - 124
1,2-Dichlorobenzene	108	ug/L	20	21.6	82 - 118
1,2-Dichloroethane	111	ug/L	20	22.2	70 - 133
1,2-Dichloroethene, Total	118	ug/L	40	47.1	78 - 125
1,2-Dichloropropane	113	ug/L	20	22.5	81 - 127
1,3-Dichlorobenzene	117	ug/L	20	23.4	81 - 118
1,3-Dichloropropane	112	ug/L	20	22.3	82 - 126
1,3-Dichloropropene, Total	103	ug/L	40	41.2	80 - 123
1,4-Dichlorobenzene	111	ug/L	20	22.3	81 - 116
2,2-Dichloropropane	133*	ug/L	20	26.7	64 - 129
2-Butanone	101	ug/L	100	101	50 - 152
2-Chloroethylvinyl ether	95	ug/L	20	19.0	1 - 150
2-Hexanone	86.5	ug/L	100	86.5	65 - 154
4-Methyl-2-Pentanone(MIBK)	91.3	ug/L	100	91.3	71 - 146
Acetone	93.7	ug/L	100	93.7	40 - 151
Benzene	114	ug/L	20	22.7	80 - 124
Bromobenzene	114	ug/L	20	22.7	81 - 119
Bromochloromethane	113	ug/L	20	22.7	73 - 117
Bromodichloromethane	101	ug/L	20	20.2	79 - 126
Bromoform	97.7	ug/L	20	19.5	70 - 123
Bromomethane	89.1	ug/L	20	17.8	45 - 148
Carbon Disulfide	119	ug/L	20	23.8	57 - 131
Carbon Tetrachloride	124	ug/L	20	24.8	62 - 132
Chlorobenzene	109	ug/L	20	21.8	85 - 117
Chlorodibromomethane	101	ug/L	20	20.2	77 - 122
Chloroethane	103	ug/L	20	20.5	51 - 142
Chloroform	113	ug/L	20	22.6	78 - 122
Chloromethane	93.2	ug/L	20	18.6	38 - 156
Cyclohexane	112	ug/L	20	22.5	66 - 130
Dibromomethane	108	ug/L	20	21.5	81 - 125

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Dichlorodifluoromethane	90.9	ug/L	20	18.2	17 - 166
Diisopropyl ether	93.7	ug/L	20	18.7	74 - 131
Ethyl tert-butyl ether	85.3	ug/L	20	17.1	75 - 123
Ethylbenzene	121	ug/L	20	24.1	80 - 124
Freon 113	143*	ug/L	20	28.6	50 - 130
Hexachlorobutadiene	146*	ug/L	20	29.1	55 - 128
Isopropylbenzene	107	ug/L	20	21.5	73 - 129
Methyl acetate	101	ug/L	20	20.2	70 - 130
Methyl cyclohexane	139*	ug/L	20	27.8	70 - 130
Methyl t-Butyl Ether	89.7	ug/L	20	17.9	69 - 115
Methylene Chloride	112	ug/L	20	22.4	76 - 121
Naphthalene	62.1	ug/L	20	12.4	56 - 134
Styrene	99	ug/L	20	19.8	79 - 123
Tetrachloroethene	122	ug/L	20	24.4	72 - 124
Toluene	104	ug/L	20	20.8	80 - 125
Total Xylenes	110	ug/L	60	65.7	79 - 125
Trichloroethene	112	ug/L	20	22.5	77 - 124
Trichlorofluoromethane	110	ug/L	20	21.9	38 - 123
Vinyl Acetate	88.1	ug/L	20	17.6	58 - 136
Vinyl Chloride	100	ug/L	20	20.0	27 - 138
cis-1,2-Dichloroethene	116	ug/L	20	23.1	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.3	81 - 121
mp-Xylene	111	ug/L	40	44.5	79 - 125
n-Butylbenzene	107	ug/L	20	21.4	71 - 130
n-Propylbenzene	114	ug/L	20	22.8	74 - 122
o-Chlorotoluene	106	ug/L	20	21.3	78 - 126
o-Xylene	106	ug/L	20	21.2	79 - 124
p-Chlorotoluene	104	ug/L	20	20.7	78 - 125
p-Isopropyltoluene	97.7	ug/L	20	19.5	72 - 123
sec-Butylbenzene	113	ug/L	20	22.5	72 - 127
tert-Amyl methyl ether	83.7	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	72.4	ug/L	100	72.4	17 - 168
tert-Butylbenzene	102	ug/L	20	20.4	72 - 124
trans-1,2-Dichloroethene	120	ug/L	20	23.9	71 - 122
trans-1,3-Dichloropropene	105	ug/L	20	21.0	78 - 126
1,2-Dichloroethane-d4 (S)	113	%			62 - 133
4-Bromofluorobenzene (S)	125*	%			79 - 114
Dibromofluoromethane (S)	92.9	%			78 - 116
Toluene-d8 (S)	92.8	%			76 - 127

MATRIX SPIKE: 2769376 DUPLICATE: 2769377 ORIGINAL: 2322628001

****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: 2322628 ALG001|LMC MRC 06/25/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	23.4193	22.8556	117	114	78 - 121	2.44	16
1,1,1-Trichloroethane	0	ug/L	20	25.3237	24.6582	127	123	66 - 130	2.66	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.8544	20.4141	94.3	102	74 - 135	7.94	16
1,1,2-Trichloroethane	0	ug/L	20	22.3303	22.1962	112	111	82 - 126	.6	15
1,1-Dichloroethane	0	ug/L	20	23.8504	23.1228	119	116	78 - 124	3.1	15
1,1-Dichloroethene	0	ug/L	20	25.7611	25.2133	129*	126	63 - 128	2.15	21
1,2,3-Trichlorobenzene	0	ug/L	20	11.1724	15.2646	55.9*	76.3	61 - 126	31	36
1,2,3-Trichloropropane	0	ug/L	20	18.6515	19.9406	93.3	99.7	75 - 132	6.68	19
1,2,4-Trichlorobenzene	0	ug/L	20	16.5694	19.8438	82.8	99.2	67 - 123	18	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.7829	21.3509	98.9	107	76 - 125	7.62	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	17.7856	18.4816	88.9	92.4	59 - 133	3.84	26
1,2-Dibromoethane	0	ug/L	20	22.3329	22.3713	112	112	80 - 124	.17	19
1,2-Dichlorobenzene	0	ug/L	20	22.6274	23.7021	113	119*	82 - 118	4.64	15
1,2-Dichloroethane	0	ug/L	20	22.4484	22.0244	112	110	70 - 133	1.91	19
1,2-Dichloroethene, Total	0	ug/L	40	49.2268	47.6442	123	119	78 - 125	3.27	40
1,2-Dichloropropane	0	ug/L	20	23.4706	23.2638	117	116	81 - 127	.89	15
1,3-Dichlorobenzene	0	ug/L	20	22.9984	24.5728	115	123*	81 - 118	6.62	16
1,3-Dichloropropane	0	ug/L	20	22.141	21.9311	111	110	82 - 126	.95	15
1,3-Dichloropropene, Total	0	ug/L	40	40.6414	40.0504	102	100	80 - 123	1.46	16
1,4-Dichlorobenzene	0	ug/L	20	22.5265	23.6767	113	118*	81 - 116	4.98	15
2,2-Dichloropropane	0	ug/L	20	28.044	27.51	140*	138*	64 - 129	1.92	18
2-Butanone	0	ug/L	100	93.7668	95.8614	93.8	95.9	50 - 152	2.21	16
2-Chloroethylvinyl ether	0	ug/L	20	2.71239	3.27082	13.6	16.4	1 - 150	18.7	40
2-Hexanone	0	ug/L	100	80.3619	87.3059	80.4	87.3	65 - 154	8.28	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	86.7342	89.7809	86.7	89.8	71 - 146	3.45	16
Acetone	9.99308	ug/L	100	97.1134	102.425	87.1	92.4	40 - 151	5.32	40
Benzene	0	ug/L	20	23.8862	23.4686	119	117	80 - 124	1.76	26
Bromobenzene	0	ug/L	20	22.5442	22.6806	113	113	81 - 119	.6	17
Bromochloromethane	0	ug/L	20	23.2242	22.6792	116	113	73 - 117	2.37	19
Bromodichloromethane	0	ug/L	20	20.7083	20.0458	104	100	79 - 126	3.25	16
Bromoform	0	ug/L	20	14.907	14.5071	74.5	72.5	70 - 123	2.72	16
Bromomethane	0	ug/L	20	18.1374	17.7862	90.7	88.9	45 - 148	1.96	26
Carbon Disulfide	0	ug/L	20	23.467	21.3623	117	107	57 - 131	9.39	28
Carbon Tetrachloride	0	ug/L	20	25.8688	25.0645	129	125	62 - 132	3.16	17
Chlorobenzene	0	ug/L	20	22.4409	22.0288	112	110	85 - 117	1.85	15
Chlorodibromomethane	0	ug/L	20	18.8262	18.4291	94.1	92.1	77 - 122	2.13	15
Chloroethane	0	ug/L	20	24.8644	24.5002	124	123	51 - 142	1.48	24
Chloroform	0	ug/L	20	23.0792	22.6524	115	113	78 - 122	1.87	16
Chloromethane	0	ug/L	20	21.3301	21.3503	107	107	38 - 156	.09	27
Cyclohexane	0	ug/L	20	23.2735	23.7003	116	119	66 - 130	1.82	20
Dibromomethane	0	ug/L	20	21.725	21.2588	109	106	81 - 125	2.17	16
Dichlorodifluoromethane	0	ug/L	20	20.7662	20.6378	104	103	17 - 166	.62	24
Diisopropyl ether	0	ug/L	20	18.8212	18.9012	94.1	94.5	74 - 131	.42	15
Ethyl tert-butyl ether	0	ug/L	20	16.9993	17.1749	85	85.9	75 - 123	1.03	16
Ethylbenzene	0	ug/L	20	24.9051	24.5282	125*	123	80 - 124	1.52	19
Freon 113	0	ug/L	20	29.5785	28.5977	148*	143*	50 - 130	3.37	26

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Hexachlorobutadiene	0	ug/L	20	29.439	29.2754	147*	146*	55 - 128	.56	35
Isopropylbenzene	0	ug/L	20	20.858	22.0471	104	110	73 - 129	5.54	18
Methyl acetate	0	ug/L	20	15.6923	15.8491	78.5	79.2	70 - 130	.99	18
Methyl cyclohexane	0	ug/L	20	28.1323	29.0403	141*	145*	70 - 130	3.18	18
Methyl t-Butyl Ether	0	ug/L	20	17.1542	17.434	85.8	87.2	69 - 115	1.62	20
Methylene Chloride	0	ug/L	20	22.8747	22.0309	114	110	76 - 121	3.76	17
Naphthalene	0	ug/L	20	9.81933	12.458	49.1*	62.3	56 - 134	23.7	40
Styrene	0	ug/L	20	18.0338	18.2146	90.2	91.1	79 - 123	1	16
Tetrachloroethene	0	ug/L	20	24.4533	24.1303	122	121	72 - 124	1.33	38
Toluene	0	ug/L	20	21.6292	21.1573	108	106	80 - 125	2.21	20
Total Xylenes	0	ug/L	60	65.5152	65.8049	109	110	79 - 125	.44	35
Trichloroethene	0	ug/L	20	24.4501	23.5993	122	118	77 - 124	3.54	18
Trichlorofluoromethane	0	ug/L	20	25.2842	24.864	126*	124*	38 - 123	1.68	23
Vinyl Acetate	0	ug/L	20	13.1078	13.192	65.5	66	58 - 136	.64	17
Vinyl Chloride	0	ug/L	20	23.5496	23.2472	118	116	27 - 138	1.29	40
cis-1,2-Dichloroethene	0	ug/L	20	24.1047	23.4932	121	117	78 - 125	2.57	21
cis-1,3-Dichloropropene	0	ug/L	20	20.181	19.8693	101	99.3	81 - 121	1.56	16
mp-Xylene	0	ug/L	40	45.5331	45.0855	114	113	79 - 125	.99	21
n-Butylbenzene	0	ug/L	20	23.7773	24.8605	119	124	71 - 130	4.45	20
n-Propylbenzene	0	ug/L	20	22.8117	23.9783	114	120	74 - 122	4.99	20
o-Chlorotoluene	0	ug/L	20	19.0529	20.3208	95.3	102	78 - 126	6.44	17
o-Xylene	0	ug/L	20	19.9821	20.7195	99.9	104	79 - 124	3.62	19
p-Chlorotoluene	0	ug/L	20	19.3189	20.4705	96.6	102	78 - 125	5.79	16
p-Isopropyltoluene	0	ug/L	20	19.074	20.8521	95.4	104	72 - 123	8.91	17
sec-Butylbenzene	0	ug/L	20	22.0026	23.9559	110	120	72 - 127	8.5	17
tert-Amyl methyl ether	0	ug/L	20	16.3201	16.885	81.6	84.4	75 - 121	3.4	40
tert-Butyl Alcohol	0	ug/L	100	77.9019	86.8656	77.9	86.9	17 - 168	10.9	40
tert-Butylbenzene	0	ug/L	20	19.6644	22.0358	98.3	110	72 - 124	11.4	17
trans-1,2-Dichloroethene	0	ug/L	20	25.1221	24.151	126*	121	71 - 122	3.94	22
trans-1,3-Dichloropropene	0	ug/L	20	20.4604	20.1811	102	101	78 - 126	1.37	18
1,2-Dichloroethane-d4 (S)	115	%				115	107	62 - 133		
4-Bromofluorobenzene (S)	120	%				120*	123*	79 - 114		
Dibromofluoromethane (S)	94.9	%				94.9	93.9	78 - 116		
Toluene-d8 (S)	93.5	%				93.5	92.4	76 - 127		

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: VOMS/47319 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2322628010, 2322628011

METHOD BLANK: 2770157

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
Carbon Disulfide	0.32J	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

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	106	%	62 - 133
4-Bromofluorobenzene (S)	109	%	79 - 114
Dibromofluoromethane (S)	101	%	78 - 116
Toluene-d8 (S)	103	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

LABORATORY CONTROL SAMPLE: 2770158

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	104	ug/L	20	20.9	78 - 121
1,1,1-Trichloroethane	98.4	ug/L	20	19.7	66 - 130
1,1,2,2-Tetrachloroethane	83.5	ug/L	20	16.7	74 - 135
1,1,2-Trichloroethane	91	ug/L	20	18.2	82 - 126
1,1-Dichloroethane	90.7	ug/L	20	18.1	78 - 124
1,1-Dichloroethene	102	ug/L	20	20.4	63 - 128
1,2,3-Trichlorobenzene	102	ug/L	20	20.3	61 - 126
1,2,3-Trichloropropane	88.4	ug/L	20	17.7	75 - 132
1,2,4-Trichlorobenzene	104	ug/L	20	20.8	67 - 123
1,2,4-Trimethylbenzene	87.7	ug/L	20	17.5	76 - 125
1,2-Dibromo-3-chloropropane	81.7	ug/L	20	16.3	59 - 133
1,2-Dibromoethane	105	ug/L	20	20.9	80 - 124
1,2-Dichlorobenzene	97.9	ug/L	20	19.6	82 - 118
1,2-Dichloroethane	92.2	ug/L	20	18.4	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.5	78 - 125
1,2-Dichloropropane	94.5	ug/L	20	18.9	81 - 127
1,3-Dichlorobenzene	98.3	ug/L	20	19.7	81 - 118
1,3-Dichloropropane	96.6	ug/L	20	19.3	82 - 126
1,3-Dichloropropene, Total	95.6	ug/L	40	38.2	80 - 123
1,4-Dichlorobenzene	91.3	ug/L	20	18.3	81 - 116
2,2-Dichloropropane	90.5	ug/L	20	18.1	64 - 129
2-Butanone	89.2	ug/L	100	89.2	50 - 152
2-Chloroethylvinyl ether	99.5	ug/L	20	19.9	1 - 150
2-Hexanone	103	ug/L	100	103	65 - 154
4-Methyl-2-Pentanone(MIBK)	99.5	ug/L	100	99.5	71 - 146
Acetone	114	ug/L	100	114	40 - 151
Benzene	93.2	ug/L	20	18.6	80 - 124
Bromobenzene	102	ug/L	20	20.4	81 - 119
Bromochloromethane	100	ug/L	20	20.0	73 - 117
Bromodichloromethane	92.1	ug/L	20	18.4	79 - 126
Bromoform	91.9	ug/L	20	18.4	70 - 123
Bromomethane	45.5	ug/L	20	9.1	45 - 148
Carbon Disulfide	114	ug/L	20	22.9	57 - 131
Carbon Tetrachloride	103	ug/L	20	20.6	62 - 132
Chlorobenzene	98.7	ug/L	20	19.7	85 - 117
Chlorodibromomethane	103	ug/L	20	20.6	77 - 122
Chloroethane	71.9	ug/L	20	14.4	51 - 142
Chloroform	98.7	ug/L	20	19.7	78 - 122
Chloromethane	104	ug/L	20	20.8	38 - 156
Cyclohexane	117	ug/L	20	23.5	66 - 130
Dibromomethane	91.5	ug/L	20	18.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Dichlorodifluoromethane	92.8	ug/L	20	18.6	17 - 166
Diisopropyl ether	104	ug/L	20	20.8	74 - 131
Ethyl tert-butyl ether	94.7	ug/L	20	18.9	75 - 123
Ethylbenzene	103	ug/L	20	20.5	80 - 124
Freon 113	128	ug/L	20	25.5	50 - 130
Hexachlorobutadiene	103	ug/L	20	20.6	55 - 128
Isopropylbenzene	83.8	ug/L	20	16.8	73 - 129
Methyl acetate	101	ug/L	20	20.2	70 - 130
Methyl cyclohexane	99.8	ug/L	20	20.0	70 - 130
Methyl t-Butyl Ether	96.1	ug/L	20	19.2	69 - 115
Methylene Chloride	104	ug/L	20	20.7	76 - 121
Naphthalene	84.6	ug/L	20	16.9	56 - 134
Styrene	101	ug/L	20	20.1	79 - 123
Tetrachloroethene	113	ug/L	20	22.5	72 - 124
Toluene	104	ug/L	20	20.8	80 - 125
Total Xylenes	110	ug/L	60	65.9	79 - 125
Trichloroethene	93.1	ug/L	20	18.6	77 - 124
Trichlorofluoromethane	78.6	ug/L	20	15.7	38 - 123
Vinyl Acetate	92.7	ug/L	20	18.5	58 - 136
Vinyl Chloride	84.4	ug/L	20	16.9	27 - 138
cis-1,2-Dichloroethene	98.6	ug/L	20	19.7	78 - 125
cis-1,3-Dichloropropene	94.7	ug/L	20	18.9	81 - 121
mp-Xylene	109	ug/L	40	43.8	79 - 125
n-Butylbenzene	84.6	ug/L	20	16.9	71 - 130
n-Propylbenzene	86.4	ug/L	20	17.3	74 - 122
o-Chlorotoluene	99.4	ug/L	20	19.9	78 - 126
o-Xylene	111	ug/L	20	22.1	79 - 124
p-Chlorotoluene	98	ug/L	20	19.6	78 - 125
p-Isopropyltoluene	96.4	ug/L	20	19.3	72 - 123
sec-Butylbenzene	98	ug/L	20	19.6	72 - 127
tert-Amyl methyl ether	94.4	ug/L	20	18.9	75 - 121
tert-Butyl Alcohol	52.1	ug/L	100	52.1	17 - 168
tert-Butylbenzene	91.4	ug/L	20	18.3	72 - 124
trans-1,2-Dichloroethene	104	ug/L	20	20.7	71 - 122
trans-1,3-Dichloropropene	96.4	ug/L	20	19.3	78 - 126
1,2-Dichloroethane-d4 (S)	105	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	95.2	%			78 - 116
Toluene-d8 (S)	100	%			76 - 127

MATRIX SPIKE: 2770788 DUPLICATE: 2770789 ORIGINAL: 2323172001

****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: 2322628 ALG001|LMC MRC 06/25/18

1,2,4-Trimethylbenzene	0	ug/L	20	18.4964	19.1271	92.5	95.6	76 - 125	3.35	24
Benzene	0	ug/L	20	21.3863	20.5197	107	103	80 - 124	4.14	26
Ethylbenzene	0	ug/L	20	22.0283	21.9067	110	110	80 - 124	.55	19
Isopropylbenzene	0	ug/L	20	18.3439	18.5411	91.7	92.7	73 - 129	1.07	18
Naphthalene	0	ug/L	20	17.3356	18.1158	86.7	90.6	56 - 134	4.4	40
Toluene	0	ug/L	20	22.3415	22.5216	112	113	80 - 125	.8	20
Total Xylenes	0	ug/L	60	70.2052	70.303	117	117	79 - 125	.14	35
n-Butylbenzene	0	ug/L	20	16.5906	18.2808	83	91.4	71 - 130	9.69	20
n-Propylbenzene	0	ug/L	20	18.334	18.8486	91.7	94.2	74 - 122	2.77	20
p-Isopropyltoluene	0	ug/L	20	20.2052	21.217	101	106	72 - 123	4.89	17
sec-Butylbenzene	0	ug/L	20	20.3668	21.6637	102	108	72 - 127	6.17	17
1,2-Dichloroethane-d4 (S)	100	%				100	97.4	62 - 133		
4-Bromofluorobenzene (S)	111	%				111	109	79 - 114		
Dibromofluoromethane (S)	98.3	%				98.3	96	78 - 116		
Toluene-d8 (S)	98.2	%				98.2	99.6	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: VOMS/47326 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2322628004, 2322628005, 2322628006, 2322628007, 2322628008, 2322628009

METHOD BLANK: 2770858

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
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

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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	2.3J	ug/L	5.0
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.6	%	62 - 133
4-Bromofluorobenzene (S)	111	%	79 - 114
Dibromofluoromethane (S)	83.2	%	78 - 116
Toluene-d8 (S)	94.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

LABORATORY CONTROL SAMPLE: 2770859

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	97.5	ug/L	20	19.5	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.8	66 - 130
1,1,2,2-Tetrachloroethane	97.6	ug/L	20	19.5	74 - 135
1,1,2-Trichloroethane	95.7	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	99.3	ug/L	20	19.9	78 - 124
1,1-Dichloroethene	108	ug/L	20	21.6	63 - 128
1,2,3-Trichlorobenzene	89.8	ug/L	20	18.0	61 - 126
1,2,3-Trichloropropane	103	ug/L	20	20.6	75 - 132
1,2,4-Trichlorobenzene	85	ug/L	20	17.0	67 - 123
1,2,4-Trimethylbenzene	92.1	ug/L	20	18.4	76 - 125
1,2-Dibromo-3-chloropropane	81	ug/L	20	16.2	59 - 133
1,2-Dibromoethane	98.4	ug/L	20	19.7	80 - 124
1,2-Dichlorobenzene	95.5	ug/L	20	19.1	82 - 118
1,2-Dichloroethane	93.3	ug/L	20	18.7	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	98.2	ug/L	20	19.6	81 - 127
1,3-Dichlorobenzene	94.2	ug/L	20	18.8	81 - 118
1,3-Dichloropropane	98	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	91	ug/L	40	36.4	80 - 123
1,4-Dichlorobenzene	89.9	ug/L	20	18.0	81 - 116
2,2-Dichloropropane	87.1	ug/L	20	17.4	64 - 129
2-Butanone	93.1	ug/L	100	93.1	50 - 152
2-Chloroethylvinyl ether	76.2	ug/L	20	15.2	1 - 150
2-Hexanone	87.8	ug/L	100	87.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	86	ug/L	100	86.0	71 - 146
Acetone	96.1	ug/L	100	96.1	40 - 151
Benzene	99.6	ug/L	20	19.9	80 - 124
Bromobenzene	109	ug/L	20	21.7	81 - 119
Bromochloromethane	94.2	ug/L	20	18.8	73 - 117
Bromodichloromethane	91.5	ug/L	20	18.3	79 - 126
Bromoform	98.7	ug/L	20	19.7	70 - 123
Bromomethane	87.8	ug/L	20	17.6	45 - 148
Carbon Disulfide	94.3	ug/L	20	18.9	57 - 131
Carbon Tetrachloride	100	ug/L	20	20.0	62 - 132
Chlorobenzene	92	ug/L	20	18.4	85 - 117
Chlorodibromomethane	93.1	ug/L	20	18.6	77 - 122
Chloroethane	93.4	ug/L	20	18.7	51 - 142
Chloroform	100	ug/L	20	20.1	78 - 122
Chloromethane	78.9	ug/L	20	15.8	38 - 156
Cyclohexane	108	ug/L	20	21.6	66 - 130
Dibromomethane	90.2	ug/L	20	18.0	81 - 125

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Dichlorodifluoromethane	74.4	ug/L	20	14.9	17 - 166
Diisopropyl ether	87.7	ug/L	20	17.5	74 - 131
Ethyl tert-butyl ether	80.8	ug/L	20	16.2	75 - 123
Ethylbenzene	100	ug/L	20	20.0	80 - 124
Freon 113	117	ug/L	20	23.4	50 - 130
Hexachlorobutadiene	102	ug/L	20	20.5	55 - 128
Isopropylbenzene	107	ug/L	20	21.5	73 - 129
Methyl acetate	105	ug/L	20	21.0	70 - 130
Methyl cyclohexane	101	ug/L	20	20.2	70 - 130
Methyl t-Butyl Ether	83.3	ug/L	20	16.7	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	84.5	ug/L	20	16.9	56 - 134
Styrene	97	ug/L	20	19.4	79 - 123
Tetrachloroethene	103	ug/L	20	20.5	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	99.9	ug/L	60	60.0	79 - 125
Trichloroethene	97.4	ug/L	20	19.5	77 - 124
Trichlorofluoromethane	89.6	ug/L	20	17.9	38 - 123
Vinyl Acetate	86.4	ug/L	20	17.3	58 - 136
Vinyl Chloride	80.5	ug/L	20	16.1	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.1	78 - 125
cis-1,3-Dichloropropene	89.5	ug/L	20	17.9	81 - 121
mp-Xylene	107	ug/L	40	42.9	79 - 125
n-Butylbenzene	94.7	ug/L	20	18.9	71 - 130
n-Propylbenzene	99	ug/L	20	19.8	74 - 122
o-Chlorotoluene	90.9	ug/L	20	18.2	78 - 126
o-Xylene	85.5	ug/L	20	17.1	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	85.9	ug/L	20	17.2	72 - 123
sec-Butylbenzene	91.1	ug/L	20	18.2	72 - 127
tert-Amyl methyl ether	79.6	ug/L	20	15.9	75 - 121
tert-Butyl Alcohol	76.8	ug/L	100	76.8	17 - 168
tert-Butylbenzene	96.2	ug/L	20	19.2	72 - 124
trans-1,2-Dichloroethene	101	ug/L	20	20.3	71 - 122
trans-1,3-Dichloropropene	92.5	ug/L	20	18.5	78 - 126
1,2-Dichloroethane-d4 (S)	88.8	%			62 - 133
4-Bromofluorobenzene (S)	121*	%			79 - 114
Dibromofluoromethane (S)	83.9	%			78 - 116
Toluene-d8 (S)	92.5	%			76 - 127

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2769176	1	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 139 and the control limits were 70 to 130.				
2769176	2	Lab Control Standard	SW846 8260B	Hexachlorobutadiene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.				
2769176	3	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 143 and the control limits were 50 to 130.				
2769176	4	Lab Control Standard	SW846 8260B	2,2-Dichloropropane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 133 and the control limits were 64 to 129.				

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July 19, 2018

Mr. Naoum Tavantzis
AECOM
7 St.Paul Street
16th Floor
Baltimore, MD 21202

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2323127**
Purchase Order:	**95840ACM**	Workorder ID:	**ALG002|LMC MRC**

Dear Mr. Tavantzis:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, June 26, 2018.

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: Ms. Holly Brown , Mr. Ravi Damera , Ms. Victoria Kirkpatrick

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

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SAMPLE SUMMARY

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2323127001	MRC-SW16A	Water	6/25/2018 14:30	6/26/2018 21:30	Ms. Victoria
2323127002	MRC-SW15A	Water	6/25/2018 14:45	6/26/2018 21:30	Ms. Victoria
2323127003	MRC-SW5A2	Water	6/25/2018 15:00	6/26/2018 21:30	Ms. Victoria
2323127004	MRC-SW5A1	Water	6/25/2018 15:05	6/26/2018 21:30	Ms. Victoria
2323127005	MRC-SW5B	Water	6/25/2018 15:15	6/26/2018 21:30	Ms. Victoria
2323127006	MRC-SW2A	Water	6/25/2018 15:30	6/26/2018 21:30	Ms. Victoria
2323127007	MRC-SW1A	Water	6/25/2018 15:45	6/26/2018 21:30	Ms. Victoria
2323127008	TB-0626-18	Water	6/26/2018 21:30	6/26/2018 21:30	Ms. Victoria
2323127009	MRC-MW11A	Water	6/25/2018 14:00	6/26/2018 21:30	Ms. Victoria
2323127010	MRC-MW16A	Water	6/25/2018 15:30	6/26/2018 21:30	Ms. Victoria
2323127011	MRC-MW16A-DUP	Water	6/25/2018 15:50	6/26/2018 21:30	Ms. Victoria
2323127012	MRC-MW17A	Water	6/26/2018 10:40	6/26/2018 21:30	Ms. Victoria
2323127013	MRC-MW17A DUP	Water	6/26/2018 10:45	6/26/2018 21:30	Ms. Victoria
2323127014	EW-2	Water	6/26/2018 11:05	6/26/2018 21:30	Ms. Victoria
2323127015	EW-1	Water	6/26/2018 13:20	6/26/2018 21:30	Ms. Victoria

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SAMPLE SUMMARY

Workorder: 2323127 ALG002|LMC MRC

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 incurbator and the "Analyzed" value is the date/time out the incubator.

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

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PROJECT SUMMARY

Workorder: 2323127 ALG002|LMC MRC

Workorder Comments

Please see attached subcontracting from ALS Rochester. VNB 7/19/18

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127001** Date Collected: 6/25/2018 14:30 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 16:55	TMP	C
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 16:55	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 16:55	TMP	C
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 16:55	TMP	C
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 16:55	TMP	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 16:55	TMP	C
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 16:55	TMP	C
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 16:55	TMP	C
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichloroethene, Total	0.51J	J,1	ug/L	2.0	0.45	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 16:55	TMP	C
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 16:55	TMP	C
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 16:55	TMP	C
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 16:55	TMP	C
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 16:55	TMP	C
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 16:55	TMP	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 16:55	TMP	C
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 16:55	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 16:55	TMP	C
Acetone	17.8		ug/L	10.0	3.1	SW846 8260B		7/6/18 16:55	TMP	C
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 16:55	TMP	C
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 16:55	TMP	C
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 16:55	TMP	C
Bromomethane	0.45J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 16:55	TMP	C
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 16:55	TMP	C
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 16:55	TMP	C
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 16:55	TMP	C

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127001** Date Collected: 6/25/2018 14:30 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 16:55	TMP	C
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 16:55	TMP	C
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 16:55	TMP	C
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 16:55	TMP	C
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 16:55	TMP	C
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 16:55	TMP	C
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 16:55	TMP	C
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 16:55	TMP	C
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 16:55	TMP	C
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 16:55	TMP	C
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 16:55	TMP	C
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 16:55	TMP	C
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 16:55	TMP	C
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 16:55	TMP	C
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 16:55	TMP	C
Trichloroethene	2.5		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 16:55	TMP	C
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 16:55	TMP	C
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 16:55	TMP	C
cis-1,2-Dichloroethene	0.51J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 16:55	TMP	C
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 16:55	TMP	C
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 16:55	TMP	C
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 16:55	TMP	C
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 16:55	TMP	C
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 16:55	TMP	C

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127001** Date Collected: 6/25/2018 14:30 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 16:55	TMP	C
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 16:55	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.5		%	62 - 133		SW846 8260B			7/6/18 16:55	TMP	C
4-Bromofluorobenzene (S)	86.2		%	79 - 114		SW846 8260B			7/6/18 16:55	TMP	C
Dibromofluoromethane (S)	89.9		%	78 - 116		SW846 8260B			7/6/18 16:55	TMP	C
Toluene-d8 (S)	82		%	76 - 127		SW846 8260B			7/6/18 16:55	TMP	C
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127002** Date Collected: 6/25/2018 14:45 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:17	TMP	C
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:17	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:17	TMP	C
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:17	TMP	C
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:17	TMP	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:17	TMP	C
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:17	TMP	C
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:17	TMP	C
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichloroethene, Total	0.46J	J,1	ug/L	2.0	0.45	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:17	TMP	C
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:17	TMP	C
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:17	TMP	C
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:17	TMP	C
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:17	TMP	C
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:17	TMP	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:17	TMP	C
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:17	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:17	TMP	C
Acetone	14.6		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:17	TMP	C
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:17	TMP	C
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:17	TMP	C
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:17	TMP	C
Bromomethane	0.47J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 17:17	TMP	C
Carbon Disulfide	0.26J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:17	TMP	C
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:17	TMP	C
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:17	TMP	C

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127002** Date Collected: 6/25/2018 14:45 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:17	TMP	C
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:17	TMP	C
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:17	TMP	C
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:17	TMP	C
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:17	TMP	C
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:17	TMP	C
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:17	TMP	C
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:17	TMP	C
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:17	TMP	C
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:17	TMP	C
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:17	TMP	C
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:17	TMP	C
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:17	TMP	C
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:17	TMP	C
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:17	TMP	C
Trichloroethene	2.3		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:17	TMP	C
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:17	TMP	C
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:17	TMP	C
cis-1,2-Dichloroethene	0.46J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:17	TMP	C
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:17	TMP	C
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:17	TMP	C
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:17	TMP	C
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:17	TMP	C
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:17	TMP	C

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127002** Date Collected: 6/25/2018 14:45 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:17	TMP	C
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:17	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.7		%	62 - 133		SW846 8260B			7/6/18 17:17	TMP	C
4-Bromofluorobenzene (S)	89.2		%	79 - 114		SW846 8260B			7/6/18 17:17	TMP	C
Dibromofluoromethane (S)	92.3		%	78 - 116		SW846 8260B			7/6/18 17:17	TMP	C
Toluene-d8 (S)	83.2		%	76 - 127		SW846 8260B			7/6/18 17:17	TMP	C
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127003** Date Collected: 6/25/2018 15:00 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:28	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:28	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:28	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:28	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:28	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:28	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:28	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:28	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:28	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:28	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:28	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:28	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:28	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:28	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:28	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:28	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:28	TMP	A
Acetone	14.1		ug/L	10.0	3.1	SW846 8260B		7/6/18 19:28	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:28	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:28	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:28	TMP	A
Bromomethane	0.45J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 19:28	TMP	A
Carbon Disulfide	0.28J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 19:28	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:28	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:28	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127003** Date Collected: 6/25/2018 15:00 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:28	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:28	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:28	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:28	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:28	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:28	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:28	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:28	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:28	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:28	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:28	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:28	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:28	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:28	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:28	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:28	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:28	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:28	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:28	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:28	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:28	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:28	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:28	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:28	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127003** Date Collected: 6/25/2018 15:00 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:28	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:28	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	79.9		%	62 - 133		SW846 8260B			7/6/18 19:28	TMP	A
4-Bromofluorobenzene (S)	88.6		%	79 - 114		SW846 8260B			7/6/18 19:28	TMP	A
Dibromofluoromethane (S)	89.6		%	78 - 116		SW846 8260B			7/6/18 19:28	TMP	A
Toluene-d8 (S)	80.5		%	76 - 127		SW846 8260B			7/6/18 19:28	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127004** Date Collected: 6/25/2018 15:05 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:50	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:50	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:50	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:50	TMP	A
Acetone	10.8		ug/L	10.0	3.1	SW846 8260B		7/6/18 19:50	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:50	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:50	TMP	A
Bromomethane	0.47J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 19:50	TMP	A
Carbon Disulfide	0.58J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 19:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127004** Date Collected: 6/25/2018 15:05 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:50	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:50	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:50	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:50	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:50	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:50	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:50	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:50	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:50	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:50	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127004** Date Collected: 6/25/2018 15:05 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.1		%	62 - 133		SW846 8260B			7/6/18 19:50	TMP	A
4-Bromofluorobenzene (S)	92.4		%	79 - 114		SW846 8260B			7/6/18 19:50	TMP	A
Dibromofluoromethane (S)	91.9		%	78 - 116		SW846 8260B			7/6/18 19:50	TMP	A
Toluene-d8 (S)	84.5		%	76 - 127		SW846 8260B			7/6/18 19:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127005** Date Collected: 6/25/2018 15:15 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 20:39	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 20:39	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 20:39	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 20:39	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 20:39	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 20:39	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 20:39	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 20:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 20:39	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 20:39	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 20:39	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 20:39	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 20:39	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 20:39	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 20:39	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 20:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 20:39	TMP	A
Acetone	15.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 20:39	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 20:39	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 20:39	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 20:39	TMP	A
Bromomethane	0.45J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 20:39	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 20:39	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 20:39	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 20:39	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127005** Date Collected: 6/25/2018 15:15 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 20:39	TMP	A
Chloromethane	0.35J	J	ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 20:39	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 20:39	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 20:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 20:39	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 20:39	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 20:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 20:39	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 20:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 20:39	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 20:39	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 20:39	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 20:39	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 20:39	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 20:39	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 20:39	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 20:39	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 20:39	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 20:39	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 20:39	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 20:39	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 20:39	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 20:39	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 20:39	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127005** Date Collected: 6/25/2018 15:15 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 20:39	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 20:39	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.2		%	62 - 133		SW846 8260B			7/6/18 20:39	TMP	A
4-Bromofluorobenzene (S)	93.2		%	79 - 114		SW846 8260B			7/6/18 20:39	TMP	A
Dibromofluoromethane (S)	94.8		%	78 - 116		SW846 8260B			7/6/18 20:39	TMP	A
Toluene-d8 (S)	84.8		%	76 - 127		SW846 8260B			7/6/18 20:39	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127006** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:01	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:01	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:01	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:01	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:01	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:01	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:01	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:01	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:01	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:01	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:01	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:01	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:01	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
2-Butanone	1.9J	J	ug/L	10.0	1.8	SW846 8260B		7/6/18 21:01	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:01	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:01	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:01	TMP	A
Acetone	21.5		ug/L	10.0	3.1	SW846 8260B		7/6/18 21:01	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:01	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:01	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:01	TMP	A
Bromomethane	0.66J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:01	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:01	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:01	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:01	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127006** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 21:01	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:01	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:01	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:01	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:01	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:01	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:01	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:01	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:01	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:01	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:01	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:01	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:01	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:01	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:01	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:01	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:01	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:01	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:01	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:01	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:01	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:01	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:01	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:01	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127006** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 21:01	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:01	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.7		%	62 - 133		SW846 8260B			7/6/18 21:01	TMP	A
4-Bromofluorobenzene (S)	91.4		%	79 - 114		SW846 8260B			7/6/18 21:01	TMP	A
Dibromofluoromethane (S)	90		%	78 - 116		SW846 8260B			7/6/18 21:01	TMP	A
Toluene-d8 (S)	81.4		%	76 - 127		SW846 8260B			7/6/18 21:01	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.021J	J	ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127007** Date Collected: 6/25/2018 15:45 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:22	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:22	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:22	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:22	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:22	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:22	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:22	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:22	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:22	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:22	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:22	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:22	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:22	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 21:22	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:22	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:22	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:22	TMP	A
Acetone	11.4		ug/L	10.0	3.1	SW846 8260B		7/6/18 21:22	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:22	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:22	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:22	TMP	A
Bromomethane	0.49J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:22	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:22	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:22	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:22	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127007** Date Collected: 6/25/2018 15:45 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 21:22	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:22	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:22	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:22	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:22	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:22	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:22	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:22	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:22	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:22	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:22	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:22	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:22	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:22	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:22	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:22	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:22	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:22	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:22	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:22	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:22	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:22	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:22	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:22	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127007** Date Collected: 6/25/2018 15:45 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 21:22	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:22	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.8		%	62 - 133		SW846 8260B			7/6/18 21:22	TMP	A
4-Bromofluorobenzene (S)	91.7		%	79 - 114		SW846 8260B			7/6/18 21:22	TMP	A
Dibromofluoromethane (S)	90.5		%	78 - 116		SW846 8260B			7/6/18 21:22	TMP	A
Toluene-d8 (S)	83.2		%	76 - 127		SW846 8260B			7/6/18 21:22	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.027J	J	ug/L	0.095	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127008** Date Collected: 6/26/2018 21:30 Matrix: Water

Sample ID: **TB-0626-18** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:07	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:07	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:07	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:07	TMP	A
1,3-Dichlorobenzene	0.37J	J	ug/L	1.0	0.25	SW846 8260B		7/6/18 19:07	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:07	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:07	TMP	A
1,4-Dichlorobenzene	0.45J	J	ug/L	1.0	0.27	SW846 8260B		7/6/18 19:07	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:07	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:07	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:07	TMP	A
Acetone	8.5J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 19:07	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:07	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:07	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:07	TMP	A
Bromomethane	0.54J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 19:07	TMP	A
Carbon Disulfide	0.58J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 19:07	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
Chlorobenzene	0.24J	J	ug/L	1.0	0.19	SW846 8260B		7/6/18 19:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127008** Date Collected: 6/26/2018 21:30 Matrix: Water

Sample ID: **TB-0626-18** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:07	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:07	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:07	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:07	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:07	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:07	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:07	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:07	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:07	TMP	A
Naphthalene	0.66J	J	ug/L	2.0	0.34	SW846 8260B		7/6/18 19:07	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:07	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:07	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:07	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:07	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:07	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:07	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:07	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:07	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:07	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:07	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127008** Date Collected: 6/26/2018 21:30 Matrix: Water

Sample ID: **TB-0626-18** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:07	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80.5		%	62 - 133		SW846 8260B			7/6/18 19:07	TMP	A
4-Bromofluorobenzene (S)	91.3		%	79 - 114		SW846 8260B			7/6/18 19:07	TMP	A
Dibromofluoromethane (S)	87.9		%	78 - 116		SW846 8260B			7/6/18 19:07	TMP	A
Toluene-d8 (S)	82.2		%	76 - 127		SW846 8260B			7/6/18 19:07	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127009** Date Collected: 6/25/2018 14:00 Matrix: Water

Sample ID: **MRC-MW11A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:44	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:44	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:44	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
1,1-Dichloroethane	2.8		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:44	TMP	A
1,1-Dichloroethene	10.4	2	ug/L	1.0	0.29	SW846 8260B		7/6/18 21:44	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:44	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:44	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:44	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichloroethene, Total	2.7	1	ug/L	2.0	0.45	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:44	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:44	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:44	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:44	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:44	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 21:44	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:44	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:44	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:44	TMP	A
Acetone	11.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 21:44	TMP	A
Benzene	0.25J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 21:44	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:44	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:44	TMP	A
Bromomethane	0.50J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:44	TMP	A
Carbon Disulfide	0.24J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 21:44	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:44	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:44	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127009** Date Collected: 6/25/2018 14:00 Matrix: Water

Sample ID: **MRC-MW11A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Chloroform	1.4		ug/L	1.0	0.21	SW846 8260B		7/6/18 21:44	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:44	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:44	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:44	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:44	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:44	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:44	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:44	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:44	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:44	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:44	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:44	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:44	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:44	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:44	TMP	A
Trichloroethene	1.7		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:44	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:44	TMP	A
Vinyl Chloride	1.1		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:44	TMP	A
cis-1,2-Dichloroethene	2.7		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:44	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:44	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:44	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:44	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:44	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:44	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127009** Date Collected: 6/25/2018 14:00 Matrix: Water

Sample ID: **MRC-MW11A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 21:44	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:44	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	85.3		%	62 - 133		SW846 8260B			7/6/18 21:44	TMP	A
4-Bromofluorobenzene (S)	90.4		%	79 - 114		SW846 8260B			7/6/18 21:44	TMP	A
Dibromofluoromethane (S)	93.8		%	78 - 116		SW846 8260B			7/6/18 21:44	TMP	A
Toluene-d8 (S)	83.5		%	76 - 127		SW846 8260B			7/6/18 21:44	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	2.0		ug/L	0.098	0.019	8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Arsenic, Total	0.0071		mg/L	0.0033	0.0011	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Chromium, Total	0.0011J	J	mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Cobalt, Total	0.028		mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Copper, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	6/29/18 09:55	AXC	6/29/18 14:35	AXC	E
Nickel, Total	0.0039J	J	mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Zinc, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127010** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-MW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:39	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:39	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:39	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
1,1-Dichloroethane	28.2	12,13	ug/L	1.0	0.28	SW846 8260B		7/6/18 17:39	TMP	A
1,1-Dichloroethene	72.7	1,2,3	ug/L	1.0	0.29	SW846 8260B		7/6/18 17:39	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:39	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:39	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichloroethane	0.33J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichloroethene, Total	12.3	33,34,35	ug/L	2.0	0.45	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:39	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:39	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:39	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:39	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:39	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:39	TMP	A
2-Chloroethylvinyl ether	ND	25	ug/L	2.0	0.38	SW846 8260B		7/6/18 17:39	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:39	TMP	A
Acetone	17.6		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:39	TMP	A
Benzene	0.70J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:39	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
Bromochloromethane	ND	16,17	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:39	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:39	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:39	TMP	A
Carbon Disulfide	ND	8,9	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:39	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127010** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-MW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Carbon Tetrachloride	ND	22	ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:39	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:39	TMP	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Chloroform	ND	18	ug/L	1.0	0.21	SW846 8260B		7/6/18 17:39	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
Cyclohexane	0.35J	J,19 ,20, 21	ug/L	1.0	0.29	SW846 8260B		7/6/18 17:39	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:39	TMP	A
Ethyl tert-butyl ether	ND	29,3 0	ug/L	1.0	0.19	SW846 8260B		7/6/18 17:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:39	TMP	A
Freon 113	ND	6,7	ug/L	1.0	0.26	SW846 8260B		7/6/18 17:39	TMP	A
Hexachlorobutadiene	ND	27,2 8	ug/L	5.0	1.0	SW846 8260B		7/6/18 17:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:39	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
Methyl cyclohexane	ND	31,3 2	ug/L	1.0	0.30	SW846 8260B		7/6/18 17:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Methylene Chloride	ND	4,5	ug/L	1.0	0.45	SW846 8260B		7/6/18 17:39	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:39	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:39	TMP	A
Tetrachloroethene	6.1	26	ug/L	1.0	0.35	SW846 8260B		7/6/18 17:39	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:39	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:39	TMP	A
Trichloroethene	20.4	23,2 4	ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:39	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:39	TMP	A
Vinyl Chloride	8.1		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:39	TMP	A
cis-1,2-Dichloroethene	12.3	14,1 5	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:39	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:39	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:39	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127010** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-MW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B			7/6/18 17:39	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B			7/6/18 17:39	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B			7/6/18 17:39	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B			7/6/18 17:39	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B			7/6/18 17:39	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			7/6/18 17:39	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			7/6/18 17:39	TMP	A
trans-1,2-Dichloroethene	ND	10,11	ug/L	1.0	0.26	SW846 8260B			7/6/18 17:39	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:39	TMP	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.6		%	62 - 133	SW846 8260B			7/6/18 17:39	TMP	A
4-Bromofluorobenzene (S)	90.2		%	79 - 114	SW846 8260B			7/6/18 17:39	TMP	A
Dibromofluoromethane (S)	87.4		%	78 - 116	SW846 8260B			7/6/18 17:39	TMP	A
Toluene-d8 (S)	81.1		%	76 - 127	SW846 8260B			7/6/18 17:39	TMP	A

SEMIVOLATILE SIM

1,4-Dioxane	42.6		ug/L	2.0	0.38	8270 SIM	6/28/18 18:00	DXL	7/2/18 20:40	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	60.8		%	29 - 112	8270 SIM	6/28/18 18:00	DXL	7/2/18 20:40	CGS	G
Fluoranthene-d10 (S)	96.1		%	45 - 130	8270 SIM	6/28/18 18:00	DXL	7/2/18 20:40	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127011** Date Collected: 6/25/2018 15:50 Matrix: Water

Sample ID: **MRC-MW16A-DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 22:06	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 22:06	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 22:06	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
1,1-Dichloroethane	30.6		ug/L	1.0	0.28	SW846 8260B		7/6/18 22:06	TMP	A
1,1-Dichloroethene	79.0	1	ug/L	1.0	0.29	SW846 8260B		7/6/18 22:06	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 22:06	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 22:06	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 22:06	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichloroethane	0.34J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichloroethene, Total	13.7	4	ug/L	2.0	0.45	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 22:06	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 22:06	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 22:06	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 22:06	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 22:06	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 22:06	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 22:06	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 22:06	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 22:06	TMP	A
Acetone	8.8J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 22:06	TMP	A
Benzene	0.80J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 22:06	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 22:06	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 22:06	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 22:06	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 22:06	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 22:06	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 22:06	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127011** Date Collected: 6/25/2018 15:50 Matrix: Water

Sample ID: **MRC-MW16A-DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 22:06	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
Cyclohexane	0.37J	J,2	ug/L	1.0	0.29	SW846 8260B		7/6/18 22:06	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 22:06	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 22:06	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 22:06	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 22:06	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 22:06	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 22:06	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 22:06	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 22:06	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 22:06	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 22:06	TMP	A
Tetrachloroethene	6.3	3	ug/L	1.0	0.35	SW846 8260B		7/6/18 22:06	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 22:06	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 22:06	TMP	A
Trichloroethene	20.7		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 22:06	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 22:06	TMP	A
Vinyl Chloride	10.9		ug/L	1.0	0.30	SW846 8260B		7/6/18 22:06	TMP	A
cis-1,2-Dichloroethene	13.7		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 22:06	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 22:06	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 22:06	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 22:06	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 22:06	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 22:06	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127011** Date Collected: 6/25/2018 15:50 Matrix: Water

Sample ID: **MRC-MW16A-DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 22:06	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 22:06	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.6		%	62 - 133		SW846 8260B			7/6/18 22:06	TMP	A
4-Bromofluorobenzene (S)	90.2		%	79 - 114		SW846 8260B			7/6/18 22:06	TMP	A
Dibromofluoromethane (S)	92		%	78 - 116		SW846 8260B			7/6/18 22:06	TMP	A
Toluene-d8 (S)	82.6		%	76 - 127		SW846 8260B			7/6/18 22:06	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	38.1		ug/L	1.9	0.36	8270 SIM	6/28/18 18:00	DXL	6/30/18 06:30	DHF	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	55.1		%	29 - 112		8270 SIM	6/28/18 18:00	DXL	6/30/18 06:30	DHF	C
Fluoranthene-d10 (S)	72.2		%	45 - 130		8270 SIM	6/28/18 18:00	DXL	6/30/18 06:30	DHF	C

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127012** Date Collected: 6/26/2018 10:40 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 02:48	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 02:48	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 02:48	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
1,1-Dichloroethane	ND	4	ug/L	1.0	0.28	SW846 8260B		7/7/18 02:48	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 02:48	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/7/18 02:48	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 02:48	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/7/18 02:48	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 02:48	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 02:48	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 02:48	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/7/18 02:48	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 02:48	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/7/18 02:48	PDK	A
2-Chloroethylvinyl ether	ND	5,6	ug/L	2.0	0.38	SW846 8260B		7/7/18 02:48	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/7/18 02:48	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/7/18 02:48	PDK	A
Acetone	7.4J	J	ug/L	10.0	3.1	SW846 8260B		7/7/18 02:48	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 02:48	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
Bromodichloromethane	0.31J	J	ug/L	1.0	0.27	SW846 8260B		7/7/18 02:48	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/7/18 02:48	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/7/18 02:48	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 02:48	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 02:48	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 02:48	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127012** Date Collected: 6/26/2018 10:40 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Chloroform	1.1		ug/L	1.0	0.21	SW846 8260B		7/7/18 02:48	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 02:48	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Diisopropyl ether	ND	1	ug/L	1.0	0.25	SW846 8260B		7/7/18 02:48	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 02:48	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 02:48	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 02:48	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/7/18 02:48	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 02:48	PDK	A
Methyl acetate	ND	2	ug/L	2.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 02:48	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Methylene Chloride	ND	3	ug/L	1.0	0.45	SW846 8260B		7/7/18 02:48	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/7/18 02:48	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 02:48	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 02:48	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 02:48	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/7/18 02:48	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 02:48	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/7/18 02:48	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 02:48	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/7/18 02:48	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 02:48	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 02:48	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/7/18 02:48	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/7/18 02:48	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/7/18 02:48	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127012** Date Collected: 6/26/2018 10:40 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/7/18 02:48	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/7/18 02:48	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			7/7/18 02:48	PDK	A
4-Bromofluorobenzene (S)	93.3		%	79 - 114		SW846 8260B			7/7/18 02:48	PDK	A
Dibromofluoromethane (S)	87.1		%	78 - 116		SW846 8260B			7/7/18 02:48	PDK	A
Toluene-d8 (S)	89.3		%	76 - 127		SW846 8260B			7/7/18 02:48	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.042J	J	ug/L	0.097	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127013** Date Collected: 6/26/2018 10:45 Matrix: Water

Sample ID: **MRC-MW17A DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:10	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:10	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:10	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:10	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:10	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/7/18 03:10	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:10	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/7/18 03:10	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:10	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:10	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:10	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/7/18 03:10	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:10	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/7/18 03:10	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/7/18 03:10	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/7/18 03:10	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/7/18 03:10	PDK	A
Acetone	9.8J	J	ug/L	10.0	3.1	SW846 8260B		7/7/18 03:10	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:10	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
Bromodichloromethane	0.30J	J	ug/L	1.0	0.27	SW846 8260B		7/7/18 03:10	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/7/18 03:10	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/7/18 03:10	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:10	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:10	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:10	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127013** Date Collected: 6/26/2018 10:45 Matrix: Water

Sample ID: **MRC-MW17A DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Chloroform	1.1		ug/L	1.0	0.21	SW846 8260B		7/7/18 03:10	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:10	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:10	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:10	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:10	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:10	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/7/18 03:10	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:10	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 03:10	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:10	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/7/18 03:10	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:10	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:10	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:10	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/7/18 03:10	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:10	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/7/18 03:10	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 03:10	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/7/18 03:10	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:10	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:10	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/7/18 03:10	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/7/18 03:10	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/7/18 03:10	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127013** Date Collected: 6/26/2018 10:45 Matrix: Water

Sample ID: **MRC-MW17A DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/7/18 03:10	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/7/18 03:10	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100		%	62 - 133		SW846 8260B			7/7/18 03:10	PDK	A
4-Bromofluorobenzene (S)	91.5		%	79 - 114		SW846 8260B			7/7/18 03:10	PDK	A
Dibromofluoromethane (S)	88.3		%	78 - 116		SW846 8260B			7/7/18 03:10	PDK	A
Toluene-d8 (S)	90.1		%	76 - 127		SW846 8260B			7/7/18 03:10	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.037J	J	ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127014** Date Collected: 6/26/2018 11:05 Matrix: Water

Sample ID: **EW-2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:07	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:07	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:07	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichloroethene, Total	23.0		ug/L	2.0	0.45	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:07	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:07	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:07	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:07	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:07	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 21:07	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:07	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:07	TMP	A
Acetone	6.7J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 21:07	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:07	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:07	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:07	TMP	A
Bromomethane	0.44J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:07	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:07	TMP	A
Carbon Tetrachloride	1.8		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:07	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127014** Date Collected: 6/26/2018 11:05 Matrix: Water

Sample ID: **EW-2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
Chloroform	0.91J	J	ug/L	1.0	0.21	SW846 8260B		7/6/18 21:07	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:07	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:07	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:07	TMP	A
Freon 113	7.1		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:07	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:07	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:07	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:07	TMP	A
Methyl t-Butyl Ether	5.4		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:07	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:07	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:07	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:07	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:07	TMP	A
Trichloroethene	2420		ug/L	50.0	16.5	SW846 8260B		7/9/18 14:58	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:07	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:07	TMP	A
cis-1,2-Dichloroethene	22.5		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:07	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:07	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:07	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:07	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:07	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127014** Date Collected: 6/26/2018 11:05 Matrix: Water

Sample ID: **EW-2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.48J	J	ug/L	1.0	0.26	SW846 8260B			7/6/18 21:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:07	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99.5		%	62 - 133		SW846 8260B			7/9/18 14:58	DD	B
1,2-Dichloroethane-d4 (S)	97.8		%	62 - 133		SW846 8260B			7/6/18 21:07	TMP	A
4-Bromofluorobenzene (S)	88.2		%	79 - 114		SW846 8260B			7/6/18 21:07	TMP	A
4-Bromofluorobenzene (S)	86.2		%	79 - 114		SW846 8260B			7/9/18 14:58	DD	B
Dibromofluoromethane (S)	84.4		%	78 - 116		SW846 8260B			7/6/18 21:07	TMP	A
Dibromofluoromethane (S)	85.5		%	78 - 116		SW846 8260B			7/9/18 14:58	DD	B
Toluene-d8 (S)	92.1		%	76 - 127		SW846 8260B			7/9/18 14:58	DD	B
Toluene-d8 (S)	95.9		%	76 - 127		SW846 8260B			7/6/18 21:07	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.13		ug/L	0.099	0.019	8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			6/26/18 11:05	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127015** Date Collected: 6/26/2018 13:20 Matrix: Water

Sample ID: **EW-1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:32	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:32	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:32	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:32	PDK	A
1,1-Dichloroethene	12.1		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:32	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/7/18 03:32	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:32	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/7/18 03:32	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dichloroethene, Total	5320		ug/L	200	45.0	SW846 8260B		7/10/18 03:22	PDK	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:32	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:32	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:32	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/7/18 03:32	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:32	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/7/18 03:32	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/7/18 03:32	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/7/18 03:32	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/7/18 03:32	PDK	A
Acetone	7.3J	J	ug/L	10.0	3.1	SW846 8260B		7/7/18 03:32	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:32	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:32	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/7/18 03:32	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/7/18 03:32	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:32	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
Chlorobenzene	1.2		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:32	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:32	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127015** Date Collected: 6/26/2018 13:20 Matrix: Water

Sample ID: **EW-1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
Chloroform	1.7		ug/L	1.0	0.21	SW846 8260B		7/7/18 03:32	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:32	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:32	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:32	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:32	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:32	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/7/18 03:32	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:32	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 03:32	PDK	A
Methyl t-Butyl Ether	0.65J	J	ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:32	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/7/18 03:32	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:32	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:32	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:32	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/7/18 03:32	PDK	A
Trichloroethene	794		ug/L	100	33.0	SW846 8260B		7/10/18 03:22	PDK	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:32	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/7/18 03:32	PDK	A
Vinyl Chloride	0.54J	J	ug/L	1.0	0.30	SW846 8260B		7/7/18 03:32	PDK	A
cis-1,2-Dichloroethene	5320		ug/L	100	32.0	SW846 8260B		7/10/18 03:22	PDK	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/7/18 03:32	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:32	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:32	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/7/18 03:32	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/7/18 03:32	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/7/18 03:32	PDK	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127015** Date Collected: 6/26/2018 13:20 Matrix: Water

Sample ID: **EW-1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	8.9		ug/L	1.0	0.26	SW846 8260B			7/7/18 03:32	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/7/18 03:32	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95		%	62 - 133		SW846 8260B			7/7/18 03:32	PDK	A
1,2-Dichloroethane-d4 (S)	89.7		%	62 - 133		SW846 8260B			7/10/18 03:22	PDK	B
4-Bromofluorobenzene (S)	91.8		%	79 - 114		SW846 8260B			7/10/18 03:22	PDK	B
4-Bromofluorobenzene (S)	88.1		%	79 - 114		SW846 8260B			7/7/18 03:32	PDK	A
Dibromofluoromethane (S)	78.1		%	78 - 116		SW846 8260B			7/10/18 03:22	PDK	B
Dibromofluoromethane (S)	86.6		%	78 - 116		SW846 8260B			7/7/18 03:32	PDK	A
Toluene-d8 (S)	90.7		%	76 - 127		SW846 8260B			7/10/18 03:22	PDK	B
Toluene-d8 (S)	89.1		%	76 - 127		SW846 8260B			7/7/18 03:32	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.075J	J	ug/L	0.099	0.019	8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			6/26/18 13:20	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2323127001	1	MRC-SW16A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2323127002	1	MRC-SW15A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2323127009	1	MRC-MW11A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2323127009	2	MRC-MW11A	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.				
2323127010	1	MRC-MW16A	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.				
2323127010	2	MRC-MW16A	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 170 and the control limits were 63 to 128.				
2323127010	3	MRC-MW16A	SW846 8260B	1,1-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 163 and the control limits were 63 to 128.				
2323127010	4	MRC-MW16A	SW846 8260B	Methylene Chloride
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 133 and the control limits were 76 to 121.				
2323127010	5	MRC-MW16A	SW846 8260B	Methylene Chloride
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 128 and the control limits were 76 to 121.				
2323127010	6	MRC-MW16A	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 163 and the control limits were 50 to 130.				
2323127010	7	MRC-MW16A	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 171 and the control limits were 50 to 130.				
2323127010	8	MRC-MW16A	SW846 8260B	Carbon Disulfide
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 144 and the control limits were 57 to 131.				
2323127010	9	MRC-MW16A	SW846 8260B	Carbon Disulfide
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 143 and the control limits were 57 to 131.				
2323127010	10	MRC-MW16A	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 140 and the control limits were 71 to 122.				

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

2323127010	11	MRC-MW16A	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 141 and the control limits were 71 to 122.

2323127010	12	MRC-MW16A	SW846 8260B	1,1-Dichloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 141 and the control limits were 78 to 124.

2323127010	13	MRC-MW16A	SW846 8260B	1,1-Dichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 139 and the control limits were 78 to 124.

2323127010	14	MRC-MW16A	SW846 8260B	cis-1,2-Dichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 136 and the control limits were 78 to 125.

2323127010	15	MRC-MW16A	SW846 8260B	cis-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 132 and the control limits were 78 to 125.

2323127010	16	MRC-MW16A	SW846 8260B	Bromochloromethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 126 and the control limits were 73 to 117.

2323127010	17	MRC-MW16A	SW846 8260B	Bromochloromethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 126 and the control limits were 73 to 117.

2323127010	18	MRC-MW16A	SW846 8260B	Chloroform

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Chloroform. The % Recovery was reported as 125 and the control limits were 78 to 122.

2323127010	19	MRC-MW16A	SW846 8260B	Cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 132 and the control limits were 66 to 130.

2323127010	20	MRC-MW16A	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 136 and the control limits were 66 to 130.

2323127010	21	MRC-MW16A	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 140 and the control limits were 66 to 130.

2323127010	22	MRC-MW16A	SW846 8260B	Carbon Tetrachloride

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 135 and the control limits were 62 to 132.

2323127010	23	MRC-MW16A	SW846 8260B	Trichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 129 and the control limits were 77 to 124.

2323127010	24	MRC-MW16A	SW846 8260B	Trichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 128 and the control limits were 77 to 124.

2323127010	25	MRC-MW16A	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 163 and the control limits were 1 to 150.

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

2323127010	26	MRC-MW16A	SW846 8260B	Tetrachloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 127 and the control limits were 72 to 124.

2323127010	27	MRC-MW16A	SW846 8260B	Hexachlorobutadiene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 135 and the control limits were 55 to 128.

2323127010	28	MRC-MW16A	SW846 8260B	Hexachlorobutadiene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.

2323127010	29	MRC-MW16A	SW846 8260B	Ethyl tert-butyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Ethyl tert-butyl ether. The % Recovery was reported as 125 and the control limits were 75 to 123.

2323127010	30	MRC-MW16A	SW846 8260B	Ethyl tert-butyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Ethyl tert-butyl ether. The % Recovery was reported as 125 and the control limits were 75 to 123.

2323127010	31	MRC-MW16A	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 141 and the control limits were 70 to 130.

2323127010	32	MRC-MW16A	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 150 and the control limits were 70 to 130.

2323127010	33	MRC-MW16A	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.

2323127010	34	MRC-MW16A	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 138 and the control limits were 78 to 125.

2323127010	35	MRC-MW16A	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 136 and the control limits were 78 to 125.

2323127011	1	MRC-MW16A-DUP	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.

2323127011	2	MRC-MW16A-DUP	SW846 8260B	Cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 132 and the control limits were 66 to 130.

2323127011	3	MRC-MW16A-DUP	SW846 8260B	Tetrachloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 127 and the control limits were 72 to 124.

2323127011	4	MRC-MW16A-DUP	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.

2323127012	1	MRC-MW17A	SW846 8260B	Diisopropyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Diisopropyl ether. The RPD was reported as 18.2 and the upper control limit is 15.

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

2323127012	2	MRC-MW17A	SW846 8260B	Methyl acetate

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl acetate. The RPD was reported as 22 and the upper control limit is 18.

2323127012	3	MRC-MW17A	SW846 8260B	Methylene Chloride

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The RPD was reported as 18.5 and the upper control limit is 17.

2323127012	4	MRC-MW17A	SW846 8260B	1,1-Dichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The RPD was reported as 16.4 and the upper control limit is 15.

2323127012	5	MRC-MW17A	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .5 and the control limits were 1 to 150.

2323127012	6	MRC-MW17A	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .5 and the control limits were 1 to 150.

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Analysis Method	Prep Method
2323127001	MRC-SW16A	8270 SIM	SW846 3510C
2323127001	MRC-SW16A	SW846 8260B	
2323127002	MRC-SW15A	8270 SIM	SW846 3510C
2323127002	MRC-SW15A	SW846 8260B	
2323127003	MRC-SW5A2	SW846 8260B	
2323127004	MRC-SW5A1	SW846 8260B	
2323127005	MRC-SW5B	SW846 8260B	
2323127006	MRC-SW2A	8270 SIM	SW846 3510C
2323127006	MRC-SW2A	SW846 8260B	
2323127007	MRC-SW1A	8270 SIM	SW846 3510C
2323127007	MRC-SW1A	SW846 8260B	
2323127008	TB-0626-18	SW846 8260B	
2323127009	MRC-MW11A	8270 SIM	SW846 3510C
2323127009	MRC-MW11A	SW846 6020A	SW846 3015
2323127009	MRC-MW11A	SW846 7470A	SW846 7470A
2323127009	MRC-MW11A	SW846 8260B	
2323127010	MRC-MW16A	8270 SIM	SW846 3510C
2323127010	MRC-MW16A	SW846 8260B	
2323127011	MRC-MW16A-DUP	8270 SIM	SW846 3510C
2323127011	MRC-MW16A-DUP	SW846 8260B	
2323127012	MRC-MW17A	8270 SIM	SW846 3510C
2323127012	MRC-MW17A	SW846 8260B	
2323127013	MRC-MW17A DUP	8270 SIM	SW846 3510C
2323127013	MRC-MW17A DUP	SW846 8260B	
2323127014	EW-2	8270 SIM	SW846 3510C
2323127014	EW-2	SW846 8260B	
2323127014	EW-2	Subcontract	
2323127015	EW-1	8270 SIM	SW846 3510C
2323127015	EW-1	SW846 8260B	
2323127015	EW-1	Subcontract	

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: EXTR/52759 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2323127001, 2323127002, 2323127006, 2323127007, 2323127009, 2323127010, 2323127011, 2323127012, 2323127013, 2323127014, 2323127015

METHOD BLANK: 2766541

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	0.029J	ug/L	0.10
2-Methylnapthalene-d10 (S)			
Fluoranthene-d10 (S)			

LABORATORY CONTROL SAMPLE: 2766542

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	29.8	ug/L	1	0.30	22 - 75
2-Methylnapthalene-d10 (S)					
Fluoranthene-d10 (S)					

MATRIX SPIKE: 2766543 DUPLICATE: 2766544 ORIGINAL: 2323127010

****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	42.6286	ug/L	.98	24.3529	28.1237	NC	NC	22 - 75	14.4	

MATRIX SPIKE: 2766545 DUPLICATE: 2766546 ORIGINAL: 2323127012

****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	.04152	ug/L	.96	.29137	.32321	26.1	29.4	22 - 75	10.4	

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: MDIG/72452 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2323127009

METHOD BLANK: 2767054

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2767055

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	108	mg/L	.002	0.0022	85 - 115

MATRIX SPIKE: 2767058 DUPLICATE: 2767059 ORIGINAL: 2322792002

****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
Mercury, Total	0	mg/L	.005	.00514	.00503	103	101	70 - 130	2.16	20

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QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: MDIG/72465 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2323127009

METHOD BLANK: 2767319

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	0.0022J	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2767320

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	94.1	mg/L	.22	0.21	80 - 120
Arsenic, Total	83.3	mg/L	.22	0.19	80 - 120
Beryllium, Total	96.1	mg/L	.22	0.21	80 - 120
Cadmium, Total	90.9	mg/L	.22	0.20	80 - 120
Chromium, Total	92.9	mg/L	.22	0.21	80 - 120
Cobalt, Total	95.3	mg/L	.22	0.21	80 - 120
Copper, Total	93.4	mg/L	.22	0.21	80 - 120
Lead, Total	98.6	mg/L	.22	0.22	80 - 120
Nickel, Total	94.4	mg/L	.22	0.21	80 - 120
Selenium, Total	88	mg/L	.22	0.20	80 - 120
Silver, Total	91.1	mg/L	.11	0.10	80 - 120
Thallium, Total	96.4	mg/L	.22	0.21	80 - 120
Zinc, Total	95.2	mg/L	.22	0.21	80 - 120

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

MATRIX SPIKE: 2767321 DUPLICATE: 2767322 ORIGINAL: 2323443003

****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
Arsenic, Total	.00213	mg/L	.22	.21269	.21224	94.8	94.5	75 - 125	.21	20
Cadmium, Total	.00003	mg/L	.22	.2162	.21327	97.3	96	75 - 125	1.37	20
Chromium, Total	.00373	mg/L	.22	.21906	.21397	96.9	94.6	75 - 125	2.35	20
Copper, Total	.00377	mg/L	.22	.21454	.21208	94.8	93.7	75 - 125	1.16	20
Lead, Total	.00058	mg/L	.22	.23019	.22593	103	101	75 - 125	1.87	20
Nickel, Total	.00272	mg/L	.22	.21384	.21028	95	93.4	75 - 125	1.68	20
Selenium, Total	.00021	mg/L	.22	.18984	.18929	85.3	85.1	75 - 125	.29	20
Silver, Total	.00013	mg/L	.11	.10194	.10094	91.6	90.7	75 - 125	.99	20
Zinc, Total	.00812	mg/L	.22	.20829	.20521	90.1	88.7	75 - 125	1.49	20

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47322 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127001, 2323127002, 2323127003, 2323127004, 2323127005, 2323127006, 2323127007, 2323127008, 2323127009, 2323127010, 2323127011

METHOD BLANK: 2770696

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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	0.46J	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

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	82.2	%	62 - 133
4-Bromofluorobenzene (S)	85.5	%	79 - 114
Dibromofluoromethane (S)	89.3	%	78 - 116
Toluene-d8 (S)	83.5	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2770697

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	98.9	ug/L	20	19.8	78 - 121
1,1,1-Trichloroethane	124	ug/L	20	24.9	66 - 130
1,1,2,2-Tetrachloroethane	84.5	ug/L	20	16.9	74 - 135
1,1,2-Trichloroethane	105	ug/L	20	21.0	82 - 126
1,1-Dichloroethane	124	ug/L	20	24.9	78 - 124
1,1-Dichloroethene	147*	ug/L	20	29.5	63 - 128
1,2,3-Trichlorobenzene	89.6	ug/L	20	17.9	61 - 126
1,2,3-Trichloropropane	86.8	ug/L	20	17.4	75 - 132
1,2,4-Trichlorobenzene	94.3	ug/L	20	18.9	67 - 123
1,2,4-Trimethylbenzene	90.3	ug/L	20	18.1	76 - 125
1,2-Dibromo-3-chloropropane	76.4	ug/L	20	15.3	59 - 133
1,2-Dibromoethane	101	ug/L	20	20.3	80 - 124
1,2-Dichlorobenzene	87.1	ug/L	20	17.4	82 - 118
1,2-Dichloroethane	112	ug/L	20	22.4	70 - 133
1,2-Dichloroethene, Total	126*	ug/L	40	50.2	78 - 125
1,2-Dichloropropane	119	ug/L	20	23.8	81 - 127
1,3-Dichlorobenzene	87.5	ug/L	20	17.5	81 - 118
1,3-Dichloropropane	98.2	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.2	80 - 123
1,4-Dichlorobenzene	85.1	ug/L	20	17.0	81 - 116
2,2-Dichloropropane	119	ug/L	20	23.7	64 - 129
2-Butanone	127	ug/L	100	127	50 - 152
2-Chloroethylvinyl ether	78.2	ug/L	20	15.6	1 - 150
2-Hexanone	106	ug/L	100	106	65 - 154
4-Methyl-2-Pentanone(MIBK)	107	ug/L	100	107	71 - 146
Acetone	124	ug/L	100	124	40 - 151
Benzene	111	ug/L	20	22.3	80 - 124
Bromobenzene	88.6	ug/L	20	17.7	81 - 119
Bromochloromethane	121*	ug/L	20	24.2	73 - 117
Bromodichloromethane	111	ug/L	20	22.2	79 - 126
Bromoform	83.7	ug/L	20	16.7	70 - 123
Bromomethane	136	ug/L	20	27.2	45 - 148
Carbon Disulfide	131	ug/L	20	26.1	57 - 131
Carbon Tetrachloride	129	ug/L	20	25.7	62 - 132
Chlorobenzene	99	ug/L	20	19.8	85 - 117
Chlorodibromomethane	99	ug/L	20	19.8	77 - 122
Chloroethane	170*	ug/L	20	34.0	51 - 142
Chloroform	122	ug/L	20	24.3	78 - 122
Chloromethane	127	ug/L	20	25.4	38 - 156
Cyclohexane	132*	ug/L	20	26.3	66 - 130
Dibromomethane	111	ug/L	20	22.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dichlorodifluoromethane	118	ug/L	20	23.6	17 - 166
Diisopropyl ether	121	ug/L	20	24.2	74 - 131
Ethyl tert-butyl ether	126*	ug/L	20	25.3	75 - 123
Ethylbenzene	104	ug/L	20	20.8	80 - 124
Freon 113	160*	ug/L	20	31.9	50 - 130
Hexachlorobutadiene	126	ug/L	20	25.1	55 - 128
Isopropylbenzene	96.6	ug/L	20	19.3	73 - 129
Methyl acetate	124	ug/L	20	24.8	70 - 130
Methyl cyclohexane	139*	ug/L	20	27.8	70 - 130
Methyl t-Butyl Ether	113	ug/L	20	22.5	69 - 115
Methylene Chloride	122*	ug/L	20	24.4	76 - 121
Naphthalene	75.4	ug/L	20	15.1	56 - 134
Styrene	86.7	ug/L	20	17.3	79 - 123
Tetrachloroethene	127*	ug/L	20	25.4	72 - 124
Toluene	107	ug/L	20	21.5	80 - 125
Total Xylenes	103	ug/L	60	61.8	79 - 125
Trichloroethene	121	ug/L	20	24.3	77 - 124
Trichlorofluoromethane	120	ug/L	20	23.9	38 - 123
Vinyl Acetate	143*	ug/L	20	28.6	58 - 136
Vinyl Chloride	121	ug/L	20	24.3	27 - 138
cis-1,2-Dichloroethene	122	ug/L	20	24.5	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.1	81 - 121
mp-Xylene	104	ug/L	40	41.8	79 - 125
n-Butylbenzene	100	ug/L	20	20.1	71 - 130
n-Propylbenzene	99.7	ug/L	20	19.9	74 - 122
o-Chlorotoluene	86.9	ug/L	20	17.4	78 - 126
o-Xylene	100	ug/L	20	20.0	79 - 124
p-Chlorotoluene	88.4	ug/L	20	17.7	78 - 125
p-Isopropyltoluene	97.4	ug/L	20	19.5	72 - 123
sec-Butylbenzene	103	ug/L	20	20.5	72 - 127
tert-Amyl methyl ether	121	ug/L	20	24.3	75 - 121
tert-Butyl Alcohol	121	ug/L	100	121	17 - 168
tert-Butylbenzene	91	ug/L	20	18.2	72 - 124
trans-1,2-Dichloroethene	129*	ug/L	20	25.8	71 - 122
trans-1,3-Dichloropropene	100	ug/L	20	20.1	78 - 126
1,2-Dichloroethane-d4 (S)	82.3	%			62 - 133
4-Bromofluorobenzene (S)	84.3	%			79 - 114
Dibromofluoromethane (S)	92.9	%			78 - 116
Toluene-d8 (S)	83.3	%			76 - 127

MATRIX SPIKE: 2770856 DUPLICATE: 2770857 ORIGINAL: 2323127010

****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: 2323127 ALG002|LMC MRC

1,1,1,2-Tetrachloroethane	0	ug/L	20	19.9584	20.6685	99.8	103	78 - 121	3.5	16
1,1,1-Trichloroethane	0	ug/L	20	25.846	25.8952	129	129	66 - 130	.19	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.0663	19.029	90.3	95.1	74 - 135	5.19	16
1,1,2-Trichloroethane	0	ug/L	20	20.9663	21.0446	105	105	82 - 126	.37	15
1,1-Dichloroethane	28.2149	ug/L	20	56.374	55.9288	141*	139*	78 - 124	.79	15
1,1-Dichloroethene	72.7311	ug/L	20	106.811	105.375	170*	163*	63 - 128	1.35	21
1,2,3-Trichlorobenzene	0	ug/L	20	19.4944	21.2125	97.5	106	61 - 126	8.44	36
1,2,3-Trichloropropane	0	ug/L	20	17.815	18.7921	89.1	94	75 - 132	5.34	19
1,2,4-Trichlorobenzene	0	ug/L	20	19.5208	22.4454	97.6	112	67 - 123	13.9	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.1693	20.8096	95.8	104	76 - 125	8.21	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.7497	17.3143	78.7	86.6	59 - 133	9.46	26
1,2-Dibromoethane	0	ug/L	20	20.0154	20.3222	100	102	80 - 124	1.52	19
1,2-Dichlorobenzene	0	ug/L	20	18.1217	20.5017	90.6	103	82 - 118	12.3	15
1,2-Dichloroethane	.32812	ug/L	20	23.6424	23.2039	117	114	70 - 133	1.87	19
1,2-Dichloroethene, Total	12.2977	ug/L	40	67.5353	66.7628	138*	136*	78 - 125	1.15	40
1,2-Dichloropropane	0	ug/L	20	25.2202	24.8674	126	124	81 - 127	1.41	15
1,3-Dichlorobenzene	0	ug/L	20	18.2605	20.3198	91.3	102	81 - 118	10.7	16
1,3-Dichloropropane	0	ug/L	20	20.2817	20.7636	101	104	82 - 126	2.35	15
1,3-Dichloropropene, Total	0	ug/L	40	40.096	41.151	100	103	80 - 123	2.6	16
1,4-Dichlorobenzene	0	ug/L	20	18.2382	20.5968	91.2	103	81 - 116	12.1	15
2,2-Dichloropropane	0	ug/L	20	24.4301	24.4225	122	122	64 - 129	.03	18
2-Butanone	0	ug/L	100	123.878	129.232	124	129	50 - 152	4.23	16
2-Chloroethylvinyl ether	0	ug/L	20	32.5809	29.4865	163*	147	1 - 150	9.97	40
2-Hexanone	0	ug/L	100	107.789	110.746	108	111	65 - 154	2.71	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	108.161	114.238	108	114	71 - 146	5.46	16
Acetone	17.6365	ug/L	100	132.991	135.587	115	118	40 - 151	1.93	40
Benzene	.70297	ug/L	20	24.6771	25.5232	120	124	80 - 124	3.37	26
Bromobenzene	0	ug/L	20	17.8513	20.4352	89.3	102	81 - 119	13.5	17
Bromochloromethane	0	ug/L	20	25.1824	25.1119	126*	126*	73 - 117	.28	19
Bromodichloromethane	0	ug/L	20	22.7302	22.5222	114	113	79 - 126	.92	16
Bromoform	0	ug/L	20	17.7807	18.9275	88.9	94.6	70 - 123	6.25	16
Bromomethane	0	ug/L	20	23.8214	21.6116	119	108	45 - 148	9.73	26
Carbon Disulfide	0	ug/L	20	28.8058	28.6976	144*	143*	57 - 131	.38	28
Carbon Tetrachloride	0	ug/L	20	26.0844	27.0487	130	135*	62 - 132	3.63	17
Chlorobenzene	0	ug/L	20	20.5732	22.0309	103	110	85 - 117	6.84	15
Chlorodibromomethane	0	ug/L	20	20.058	20.2608	100	101	77 - 122	1.01	15
Chloroethane	0	ug/L	20	25.834	22.0269	129	110	51 - 142	15.9	24
Chloroform	0	ug/L	20	24.4946	24.9986	122	125*	78 - 122	2.04	16
Chloromethane	0	ug/L	20	18.0325	15.9246	90.2	79.6	38 - 156	12.4	27
Cyclohexane	.34839	ug/L	20	27.6146	28.3849	136*	140*	66 - 130	2.75	20
Dibromomethane	0	ug/L	20	22.4521	22.946	112	115	81 - 125	2.18	16
Dichlorodifluoromethane	0	ug/L	20	12.4657	10.4682	62.3	52.3	17 - 166	17.4	24
Diisopropyl ether	0	ug/L	20	24.4711	24.4964	122	122	74 - 131	.1	15
Ethyl tert-butyl ether	0	ug/L	20	25.0497	25.0539	125*	125*	75 - 123	.02	16
Ethylbenzene	0	ug/L	20	21.2304	22.1028	106	111	80 - 124	4.03	19
Freon 113	0	ug/L	20	32.6221	34.1136	163*	171*	50 - 130	4.47	26

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Hexachlorobutadiene	0	ug/L	20	26.998	29.2372	135*	146*	55 - 128	7.96	35
Isopropylbenzene	0	ug/L	20	20.6264	22.1605	103	111	73 - 129	7.17	18
Methyl acetate	0	ug/L	20	20.8711	21.3463	104	107	70 - 130	2.25	18
Methyl cyclohexane	0	ug/L	20	28.1414	29.975	141*	150*	70 - 130	6.31	18
Methyl t-Butyl Ether	0	ug/L	20	22.7276	23.0638	114	115	69 - 115	1.47	20
Methylene Chloride	0	ug/L	20	26.5502	25.6731	133*	128*	76 - 121	3.36	17
Naphthalene	0	ug/L	20	16.4071	18.9551	82	94.8	56 - 134	14.4	40
Styrene	0	ug/L	20	18.2358	20.0982	91.2	100	79 - 123	9.72	16
Tetrachloroethene	6.06213	ug/L	20	29.2104	30.7372	116	123	72 - 124	5.09	38
Toluene	0	ug/L	20	21.8671	23.0205	109	115	80 - 125	5.14	20
Total Xylenes	0	ug/L	60	64.5839	66.1405	108	110	79 - 125	2.38	35
Trichloroethene	20.4031	ug/L	20	46.2419	46.0496	129*	128*	77 - 124	.42	18
Trichlorofluoromethane	0	ug/L	20	18.8742	16.1797	94.4	80.9	38 - 123	15.4	23
Vinyl Acetate	0	ug/L	20	21.2945	22.0412	106	110	58 - 136	3.45	17
Vinyl Chloride	8.11519	ug/L	20	25.8793	23.347	88.8	76.2	27 - 138	10.3	40
cis-1,2-Dichloroethene	12.2977	ug/L	20	39.5857	38.6434	136*	132*	78 - 125	2.41	21
cis-1,3-Dichloropropene	0	ug/L	20	19.709	20.6157	98.5	103	81 - 121	4.5	16
mp-Xylene	0	ug/L	40	44.1692	44.8714	110	112	79 - 125	1.58	21
n-Butylbenzene	0	ug/L	20	20.8592	23.1003	104	116	71 - 130	10.2	20
n-Propylbenzene	0	ug/L	20	20.1825	22.38	101	112	74 - 122	10.3	20
o-Chlorotoluene	0	ug/L	20	18.4165	19.9241	92.1	99.6	78 - 126	7.86	17
o-Xylene	0	ug/L	20	20.4146	21.2691	102	106	79 - 124	4.1	19
p-Chlorotoluene	0	ug/L	20	18.5394	19.9434	92.7	99.7	78 - 125	7.3	16
p-Isopropyltoluene	0	ug/L	20	21.0755	22.3216	105	112	72 - 123	5.74	17
sec-Butylbenzene	0	ug/L	20	21.4037	23.5219	107	118	72 - 127	9.43	17
tert-Amyl methyl ether	0	ug/L	20	23.4915	24.1187	117	121	75 - 121	2.63	40
tert-Butyl Alcohol	0	ug/L	100	122.533	123.667	123	124	17 - 168	.92	40
tert-Butylbenzene	0	ug/L	20	19.7524	21.0403	98.8	105	72 - 124	6.31	17
trans-1,2-Dichloroethene	0	ug/L	20	27.9495	28.1194	140*	141*	71 - 122	.61	22
trans-1,3-Dichloropropene	0	ug/L	20	20.387	20.5353	102	103	78 - 126	.72	18
1,2-Dichloroethane-d4 (S)	82.5	%				82.5	80.3	62 - 133		
4-Bromofluorobenzene (S)	86.7	%				86.7	92.6	79 - 114		
Dibromofluoromethane (S)	92.5	%				92.5	92.2	78 - 116		
Toluene-d8 (S)	80.8	%				80.8	83	76 - 127		

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47323 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127012, 2323127013, 2323127015

METHOD BLANK: 2770709

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
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

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	96.4	%	62 - 133
4-Bromofluorobenzene (S)	93.3	%	79 - 114
Dibromofluoromethane (S)	82.7	%	78 - 116
Toluene-d8 (S)	97.2	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2770710

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	99.9	ug/L	20	20.0	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.9	66 - 130
1,1,2,2-Tetrachloroethane	91.6	ug/L	20	18.3	74 - 135
1,1,2-Trichloroethane	102	ug/L	20	20.4	82 - 126
1,1-Dichloroethane	98.3	ug/L	20	19.7	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.8	63 - 128
1,2,3-Trichlorobenzene	83.5	ug/L	20	16.7	61 - 126
1,2,3-Trichloropropane	95.3	ug/L	20	19.1	75 - 132
1,2,4-Trichlorobenzene	84.2	ug/L	20	16.8	67 - 123
1,2,4-Trimethylbenzene	91.4	ug/L	20	18.3	76 - 125
1,2-Dibromo-3-chloropropane	72.5	ug/L	20	14.5	59 - 133
1,2-Dibromoethane	105	ug/L	20	21.1	80 - 124
1,2-Dichlorobenzene	97.2	ug/L	20	19.4	82 - 118
1,2-Dichloroethane	94	ug/L	20	18.8	70 - 133
1,2-Dichloroethene, Total	102	ug/L	40	40.6	78 - 125
1,2-Dichloropropane	96.2	ug/L	20	19.2	81 - 127
1,3-Dichlorobenzene	97	ug/L	20	19.4	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.8	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.2	80 - 123
1,4-Dichlorobenzene	92	ug/L	20	18.4	81 - 116
2,2-Dichloropropane	110	ug/L	20	22.0	64 - 129
2-Butanone	106	ug/L	100	106	50 - 152
2-Chloroethylvinyl ether	68.3	ug/L	20	13.7	1 - 150
2-Hexanone	105	ug/L	100	105	65 - 154
4-Methyl-2-Pentanone(MIBK)	91.9	ug/L	100	91.9	71 - 146
Acetone	145	ug/L	100	145	40 - 151
Benzene	100	ug/L	20	20.1	80 - 124
Bromobenzene	101	ug/L	20	20.2	81 - 119
Bromochloromethane	97.2	ug/L	20	19.4	73 - 117
Bromodichloromethane	91.3	ug/L	20	18.3	79 - 126
Bromoform	80.1	ug/L	20	16.0	70 - 123
Bromomethane	85.1	ug/L	20	17.0	45 - 148
Carbon Disulfide	95.4	ug/L	20	19.1	57 - 131
Carbon Tetrachloride	102	ug/L	20	20.3	62 - 132
Chlorobenzene	94.4	ug/L	20	18.9	85 - 117
Chlorodibromomethane	97	ug/L	20	19.4	77 - 122
Chloroethane	90	ug/L	20	18.0	51 - 142
Chloroform	99.8	ug/L	20	20.0	78 - 122
Chloromethane	72.2	ug/L	20	14.4	38 - 156
Cyclohexane	110	ug/L	20	22.0	66 - 130
Dibromomethane	91.7	ug/L	20	18.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dichlorodifluoromethane	74.2	ug/L	20	14.8	17 - 166
Diisopropyl ether	89.8	ug/L	20	18.0	74 - 131
Ethyl tert-butyl ether	81.9	ug/L	20	16.4	75 - 123
Ethylbenzene	104	ug/L	20	20.7	80 - 124
Freon 113	123	ug/L	20	24.6	50 - 130
Hexachlorobutadiene	101	ug/L	20	20.2	55 - 128
Isopropylbenzene	94.4	ug/L	20	18.9	73 - 129
Methyl acetate	105	ug/L	20	21.0	70 - 130
Methyl cyclohexane	118	ug/L	20	23.6	70 - 130
Methyl t-Butyl Ether	85.7	ug/L	20	17.1	69 - 115
Methylene Chloride	102	ug/L	20	20.5	76 - 121
Naphthalene	75	ug/L	20	15.0	56 - 134
Styrene	88.8	ug/L	20	17.8	79 - 123
Tetrachloroethene	110	ug/L	20	22.0	72 - 124
Toluene	112	ug/L	20	22.4	80 - 125
Total Xylenes	104	ug/L	60	62.5	79 - 125
Trichloroethene	102	ug/L	20	20.5	77 - 124
Trichlorofluoromethane	91.8	ug/L	20	18.4	38 - 123
Vinyl Acetate	87.7	ug/L	20	17.5	58 - 136
Vinyl Chloride	77.9	ug/L	20	15.6	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.2	78 - 125
cis-1,3-Dichloropropene	98.7	ug/L	20	19.7	81 - 121
mp-Xylene	110	ug/L	40	44.1	79 - 125
n-Butylbenzene	106	ug/L	20	21.3	71 - 130
n-Propylbenzene	94.1	ug/L	20	18.8	74 - 122
o-Chlorotoluene	92.7	ug/L	20	18.5	78 - 126
o-Xylene	92.1	ug/L	20	18.4	79 - 124
p-Chlorotoluene	108	ug/L	20	21.7	78 - 125
p-Isopropyltoluene	92	ug/L	20	18.4	72 - 123
sec-Butylbenzene	100	ug/L	20	20.1	72 - 127
tert-Amyl methyl ether	80.7	ug/L	20	16.1	75 - 121
tert-Butyl Alcohol	75.9	ug/L	100	75.9	17 - 168
tert-Butylbenzene	93	ug/L	20	18.6	72 - 124
trans-1,2-Dichloroethene	102	ug/L	20	20.4	71 - 122
trans-1,3-Dichloropropene	102	ug/L	20	20.4	78 - 126
1,2-Dichloroethane-d4 (S)	91.1	%			62 - 133
4-Bromofluorobenzene (S)	95.1	%			79 - 114
Dibromofluoromethane (S)	82.6	%			78 - 116
Toluene-d8 (S)	93.7	%			76 - 127

MATRIX SPIKE: 2770997 DUPLICATE: 2770998 ORIGINAL: 2323127012

****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: 2323127 ALG002|LMC MRC

1,1,1,2-Tetrachloroethane	0	ug/L	20	20.8418	20.8845	104	104	78 - 121	.2	16
1,1,1-Trichloroethane	0	ug/L	20	22.8276	22.4735	114	112	66 - 130	1.56	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	19.9315	19.2472	99.7	96.2	74 - 135	3.49	16
1,1,2-Trichloroethane	0	ug/L	20	19.737	19.883	98.7	99.4	82 - 126	.74	15
1,1-Dichloroethane	0	ug/L	20	21.2818	18.0568	106	90.3	78 - 124	16.4	15
1,1-Dichloroethene	0	ug/L	20	19.7482	19.5254	98.7	97.6	63 - 128	1.13	21
1,2,3-Trichlorobenzene	0	ug/L	20	15.4012	16.1312	77	80.7	61 - 126	4.63	36
1,2,3-Trichloropropane	0	ug/L	20	21.4373	20.2309	107	101	75 - 132	5.79	19
1,2,4-Trichlorobenzene	0	ug/L	20	14.9184	16.1817	74.6	80.9	67 - 123	8.12	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.6579	19.3731	98.3	96.9	76 - 125	1.46	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.3816	15.158	76.9	75.8	59 - 133	1.46	26
1,2-Dibromoethane	0	ug/L	20	20.5193	20.687	103	103	80 - 124	.81	19
1,2-Dichlorobenzene	0	ug/L	20	20.7676	20.6231	104	103	82 - 118	.7	15
1,2-Dichloroethane	0	ug/L	20	19.8775	19.7374	99.4	98.7	70 - 133	.71	19
1,2-Dichloroethene, Total	0	ug/L	40	43.9949	38.2037	110	95.5	78 - 125	14.1	40
1,2-Dichloropropane	0	ug/L	20	21.5206	21.4358	108	107	81 - 127	.39	15
1,3-Dichlorobenzene	0	ug/L	20	20.528	20.317	103	102	81 - 118	1.03	16
1,3-Dichloropropane	0	ug/L	20	20.935	20.9534	105	105	82 - 126	.09	15
1,3-Dichloropropene, Total	0	ug/L	40	38.8426	39.4529	97.1	98.6	80 - 123	1.56	16
1,4-Dichlorobenzene	0	ug/L	20	19.3225	19.1346	96.6	95.7	81 - 116	.98	15
2,2-Dichloropropane	0	ug/L	20	21.6988	21.1789	108	106	64 - 129	2.43	18
2-Butanone	0	ug/L	100	88.3399	93.5535	88.3	93.6	50 - 152	5.73	16
2-Chloroethylvinyl ether	0	ug/L	20	.10071	.09949	.5*	.5*	1 - 150	1.22	40
2-Hexanone	0	ug/L	100	90.2221	94.0332	90.2	94	65 - 154	4.14	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	89.8488	91.2903	89.8	91.3	71 - 146	1.59	16
Acetone	7.38144	ug/L	100	103.533	81.0743	96.2	73.7	40 - 151	24.3	40
Benzene	0	ug/L	20	21.5268	21.3386	108	107	80 - 124	.88	26
Bromobenzene	0	ug/L	20	22.2293	21.9965	111	110	81 - 119	1.05	17
Bromochloromethane	0	ug/L	20	20.3892	19.6793	102	98.4	73 - 117	3.54	19
Bromodichloromethane	.30647	ug/L	20	20.0637	20.2014	98.8	99.5	79 - 126	.68	16
Bromoform	0	ug/L	20	18.2698	17.6786	91.3	88.4	70 - 123	3.29	16
Bromomethane	0	ug/L	20	17.1183	16.5727	85.6	82.9	45 - 148	3.24	26
Carbon Disulfide	0	ug/L	20	16.0126	15.8113	80.1	79.1	57 - 131	1.27	28
Carbon Tetrachloride	0	ug/L	20	22.0504	22.0412	110	110	62 - 132	.04	17
Chlorobenzene	0	ug/L	20	19.8349	19.8694	99.2	99.3	85 - 117	.17	15
Chlorodibromomethane	0	ug/L	20	19.1737	19.2447	95.9	96.2	77 - 122	.37	15
Chloroethane	0	ug/L	20	20.0961	20.4742	100	102	51 - 142	1.86	24
Chloroform	1.08031	ug/L	20	22.5588	22.3365	107	106	78 - 122	.99	16
Chloromethane	0	ug/L	20	16.5696	16.4586	82.8	82.3	38 - 156	.67	27
Cyclohexane	0	ug/L	20	23.6553	23.515	118	118	66 - 130	.59	20
Dibromomethane	0	ug/L	20	19.187	18.7726	95.9	93.9	81 - 125	2.18	16
Dichlorodifluoromethane	0	ug/L	20	16.6515	16.3327	83.3	81.7	17 - 166	1.93	24
Diisopropyl ether	0	ug/L	20	19.176	15.9838	95.9	79.9	74 - 131	18.2	15
Ethyl tert-butyl ether	0	ug/L	20	17.7629	15.4881	88.8	77.4	75 - 123	13.7	16
Ethylbenzene	0	ug/L	20	21.5675	22.0161	108	110	80 - 124	2.06	19
Freon 113	0	ug/L	20	22.5339	22.0683	113	110	50 - 130	2.09	26

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Hexachlorobutadiene	0	ug/L	20	15.6584	17.5789	78.3	87.9	55 - 128	11.6	35
Isopropylbenzene	0	ug/L	20	22.3085	21.7921	112	109	73 - 129	2.34	18
Methyl acetate	0	ug/L	20	18.3728	14.7341	91.9	73.7	70 - 130	22	18
Methyl cyclohexane	0	ug/L	20	20.8832	21.2523	104	106	70 - 130	1.75	18
Methyl t-Butyl Ether	0	ug/L	20	17.8143	15.6105	89.1	78.1	69 - 115	13.2	20
Methylene Chloride	0	ug/L	20	21.8097	18.1096	109	90.5	76 - 121	18.5	17
Naphthalene	0	ug/L	20	17.2224	16.9307	86.1	84.7	56 - 134	1.71	40
Styrene	0	ug/L	20	20.3364	19.7473	102	98.7	79 - 123	2.94	16
Tetrachloroethene	0	ug/L	20	21.16	21.485	106	107	72 - 124	1.52	38
Toluene	0	ug/L	20	23.3281	23.4276	117	117	80 - 125	.43	20
Total Xylenes	0	ug/L	60	65.1681	65.6729	109	109	79 - 125	.77	35
Trichloroethene	0	ug/L	20	21.7743	21.6363	109	108	77 - 124	.64	18
Trichlorofluoromethane	0	ug/L	20	19.5405	19.6371	97.7	98.2	38 - 123	.49	23
Vinyl Acetate	0	ug/L	20	15.938	14.1043	79.7	70.5	58 - 136	12.2	17
Vinyl Chloride	0	ug/L	20	16.6973	16.7392	83.5	83.7	27 - 138	.25	40
cis-1,2-Dichloroethene	0	ug/L	20	22.0335	19.7956	110	99	78 - 125	10.7	21
cis-1,3-Dichloropropene	0	ug/L	20	18.9325	19.371	94.7	96.9	81 - 121	2.29	16
mp-Xylene	0	ug/L	40	46.5044	46.6958	116	117	79 - 125	.41	21
n-Butylbenzene	0	ug/L	20	19.6511	20.2038	98.3	101	71 - 130	2.77	20
n-Propylbenzene	0	ug/L	20	20.3901	20.2271	102	101	74 - 122	.8	20
o-Chlorotoluene	0	ug/L	20	20.6564	20.2955	103	101	78 - 126	1.76	17
o-Xylene	0	ug/L	20	18.6637	18.9771	93.3	94.9	79 - 124	1.67	19
p-Chlorotoluene	0	ug/L	20	23.8203	23.2737	119	116	78 - 125	2.32	16
p-Isopropyltoluene	0	ug/L	20	18.2693	18.4403	91.3	92.2	72 - 123	.93	17
sec-Butylbenzene	0	ug/L	20	19.7748	20.0728	98.9	100	72 - 127	1.5	17
tert-Amyl methyl ether	0	ug/L	20	17.2867	17.5835	86.4	87.9	75 - 121	1.7	40
tert-Butyl Alcohol	0	ug/L	100	77.9516	73.223	78	73.2	17 - 168	6.26	40
tert-Butylbenzene	0	ug/L	20	19.7183	19.8008	98.6	99	72 - 124	.42	17
trans-1,2-Dichloroethene	0	ug/L	20	21.9614	18.4081	110	92	71 - 122	17.6	22
trans-1,3-Dichloropropene	0	ug/L	20	19.91	20.082	99.6	100	78 - 126	.86	18
1,2-Dichloroethane-d4 (S)	91.5	%				91.5	91.4	62 - 133		
4-Bromofluorobenzene (S)	97.7	%				97.7	97.9	79 - 114		
Dibromofluoromethane (S)	82.4	%				82.4	82.2	78 - 116		
Toluene-d8 (S)	87.4	%				87.4	89.3	76 - 127		

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47326 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127014

METHOD BLANK: 2770858

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
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

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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	2.3J	ug/L	5.0
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.6	%	62 - 133
4-Bromofluorobenzene (S)	111	%	79 - 114
Dibromofluoromethane (S)	83.2	%	78 - 116
Toluene-d8 (S)	94.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2770859

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	97.5	ug/L	20	19.5	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.8	66 - 130
1,1,2,2-Tetrachloroethane	97.6	ug/L	20	19.5	74 - 135
1,1,2-Trichloroethane	95.7	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	99.3	ug/L	20	19.9	78 - 124
1,1-Dichloroethene	108	ug/L	20	21.6	63 - 128
1,2,3-Trichlorobenzene	89.8	ug/L	20	18.0	61 - 126
1,2,3-Trichloropropane	103	ug/L	20	20.6	75 - 132
1,2,4-Trichlorobenzene	85	ug/L	20	17.0	67 - 123
1,2,4-Trimethylbenzene	92.1	ug/L	20	18.4	76 - 125
1,2-Dibromo-3-chloropropane	81	ug/L	20	16.2	59 - 133
1,2-Dibromoethane	98.4	ug/L	20	19.7	80 - 124
1,2-Dichlorobenzene	95.5	ug/L	20	19.1	82 - 118
1,2-Dichloroethane	93.3	ug/L	20	18.7	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	98.2	ug/L	20	19.6	81 - 127
1,3-Dichlorobenzene	94.2	ug/L	20	18.8	81 - 118
1,3-Dichloropropane	98	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	91	ug/L	40	36.4	80 - 123
1,4-Dichlorobenzene	89.9	ug/L	20	18.0	81 - 116
2,2-Dichloropropane	87.1	ug/L	20	17.4	64 - 129
2-Butanone	93.1	ug/L	100	93.1	50 - 152
2-Chloroethylvinyl ether	76.2	ug/L	20	15.2	1 - 150
2-Hexanone	87.8	ug/L	100	87.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	86	ug/L	100	86.0	71 - 146
Acetone	96.1	ug/L	100	96.1	40 - 151
Benzene	99.6	ug/L	20	19.9	80 - 124
Bromobenzene	109	ug/L	20	21.7	81 - 119
Bromochloromethane	94.2	ug/L	20	18.8	73 - 117
Bromodichloromethane	91.5	ug/L	20	18.3	79 - 126
Bromoform	98.7	ug/L	20	19.7	70 - 123
Bromomethane	87.8	ug/L	20	17.6	45 - 148
Carbon Disulfide	94.3	ug/L	20	18.9	57 - 131
Carbon Tetrachloride	100	ug/L	20	20.0	62 - 132
Chlorobenzene	92	ug/L	20	18.4	85 - 117
Chlorodibromomethane	93.1	ug/L	20	18.6	77 - 122
Chloroethane	93.4	ug/L	20	18.7	51 - 142
Chloroform	100	ug/L	20	20.1	78 - 122
Chloromethane	78.9	ug/L	20	15.8	38 - 156
Cyclohexane	108	ug/L	20	21.6	66 - 130
Dibromomethane	90.2	ug/L	20	18.0	81 - 125

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dichlorodifluoromethane	74.4	ug/L	20	14.9	17 - 166
Diisopropyl ether	87.7	ug/L	20	17.5	74 - 131
Ethyl tert-butyl ether	80.8	ug/L	20	16.2	75 - 123
Ethylbenzene	100	ug/L	20	20.0	80 - 124
Freon 113	117	ug/L	20	23.4	50 - 130
Hexachlorobutadiene	102	ug/L	20	20.5	55 - 128
Isopropylbenzene	107	ug/L	20	21.5	73 - 129
Methyl acetate	105	ug/L	20	21.0	70 - 130
Methyl cyclohexane	101	ug/L	20	20.2	70 - 130
Methyl t-Butyl Ether	83.3	ug/L	20	16.7	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	84.5	ug/L	20	16.9	56 - 134
Styrene	97	ug/L	20	19.4	79 - 123
Tetrachloroethene	103	ug/L	20	20.5	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	99.9	ug/L	60	60.0	79 - 125
Trichlorofluoromethane	89.6	ug/L	20	17.9	38 - 123
Vinyl Acetate	86.4	ug/L	20	17.3	58 - 136
Vinyl Chloride	80.5	ug/L	20	16.1	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.1	78 - 125
cis-1,3-Dichloropropene	89.5	ug/L	20	17.9	81 - 121
mp-Xylene	107	ug/L	40	42.9	79 - 125
n-Butylbenzene	94.7	ug/L	20	18.9	71 - 130
n-Propylbenzene	99	ug/L	20	19.8	74 - 122
o-Chlorotoluene	90.9	ug/L	20	18.2	78 - 126
o-Xylene	85.5	ug/L	20	17.1	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	85.9	ug/L	20	17.2	72 - 123
sec-Butylbenzene	91.1	ug/L	20	18.2	72 - 127
tert-Amyl methyl ether	79.6	ug/L	20	15.9	75 - 121
tert-Butyl Alcohol	76.8	ug/L	100	76.8	17 - 168
tert-Butylbenzene	96.2	ug/L	20	19.2	72 - 124
trans-1,2-Dichloroethene	101	ug/L	20	20.3	71 - 122
trans-1,3-Dichloropropene	92.5	ug/L	20	18.5	78 - 126
1,2-Dichloroethane-d4 (S)	88.8	%			62 - 133
4-Bromofluorobenzene (S)	121*	%			79 - 114
Dibromofluoromethane (S)	83.9	%			78 - 116
Toluene-d8 (S)	92.5	%			76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47336 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127014

METHOD BLANK: 2771294

Parameter	Blank Result	Units	Reporting Limit
Trichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
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

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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	1.3J	ug/L	5.0
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	94.3	%	62 - 133
4-Bromofluorobenzene (S)	86.8	%	79 - 114
Dibromofluoromethane (S)	82.4	%	78 - 116
Toluene-d8 (S)	84	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2771295

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Trichloroethene	99.2	ug/L	20	19.8	77 - 124
1,1,1,2-Tetrachloroethane	102	ug/L	20	20.4	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.7	66 - 130
1,1,2,2-Tetrachloroethane	86.1	ug/L	20	17.2	74 - 135
1,1,2-Trichloroethane	104	ug/L	20	20.8	82 - 126
1,1-Dichloroethane	100	ug/L	20	20.1	78 - 124
1,1-Dichloroethene	105	ug/L	20	21.1	63 - 128
1,2,3-Trichlorobenzene	78.8	ug/L	20	15.8	61 - 126
1,2,3-Trichloropropane	97.5	ug/L	20	19.5	75 - 132
1,2,4-Trichlorobenzene	80.9	ug/L	20	16.2	67 - 123
1,2,4-Trimethylbenzene	87	ug/L	20	17.4	76 - 125
1,2-Dibromo-3-chloropropane	67.6	ug/L	20	13.5	59 - 133
1,2-Dibromoethane	106	ug/L	20	21.1	80 - 124
1,2-Dichlorobenzene	96.7	ug/L	20	19.3	82 - 118
1,2-Dichloroethane	94.2	ug/L	20	18.8	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	100	ug/L	20	20.0	81 - 127
1,3-Dichlorobenzene	95.5	ug/L	20	19.1	81 - 118
1,3-Dichloropropane	103	ug/L	20	20.6	82 - 126
1,3-Dichloropropene, Total	102	ug/L	40	40.8	80 - 123
1,4-Dichlorobenzene	90.8	ug/L	20	18.2	81 - 116
2,2-Dichloropropane	106	ug/L	20	21.1	64 - 129
2-Butanone	91.9	ug/L	100	91.9	50 - 152
2-Chloroethylvinyl ether	64.2	ug/L	20	12.8	1 - 150
2-Hexanone	89.9	ug/L	100	89.9	65 - 154
4-Methyl-2-Pentanone(MIBK)	90.5	ug/L	100	90.5	71 - 146
Acetone	95.9	ug/L	100	95.9	40 - 151
Benzene	100	ug/L	20	20.0	80 - 124
Bromobenzene	102	ug/L	20	20.3	81 - 119
Bromochloromethane	96.6	ug/L	20	19.3	73 - 117
Bromodichloromethane	92.9	ug/L	20	18.6	79 - 126
Bromoform	79.3	ug/L	20	15.9	70 - 123
Bromomethane	73.7	ug/L	20	14.7	45 - 148
Carbon Disulfide	97.3	ug/L	20	19.5	57 - 131
Carbon Tetrachloride	102	ug/L	20	20.5	62 - 132
Chlorobenzene	94.5	ug/L	20	18.9	85 - 117
Chlorodibromomethane	94.6	ug/L	20	18.9	77 - 122
Chloroethane	83.7	ug/L	20	16.7	51 - 142
Chloroform	98	ug/L	20	19.6	78 - 122
Chloromethane	66.1	ug/L	20	13.2	38 - 156
Cyclohexane	107	ug/L	20	21.4	66 - 130

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dibromomethane	91.3	ug/L	20	18.3	81 - 125
Dichlorodifluoromethane	58.7	ug/L	20	11.7	17 - 166
Diisopropyl ether	90.4	ug/L	20	18.1	74 - 131
Ethyl tert-butyl ether	85.1	ug/L	20	17.0	75 - 123
Ethylbenzene	102	ug/L	20	20.5	80 - 124
Freon 113	116	ug/L	20	23.1	50 - 130
Hexachlorobutadiene	104	ug/L	20	20.8	55 - 128
Isopropylbenzene	95	ug/L	20	19.0	73 - 129
Methyl acetate	101	ug/L	20	20.2	70 - 130
Methyl cyclohexane	108	ug/L	20	21.7	70 - 130
Methyl t-Butyl Ether	87.7	ug/L	20	17.5	69 - 115
Methylene Chloride	103	ug/L	20	20.6	76 - 121
Naphthalene	67.5	ug/L	20	13.5	56 - 134
Styrene	84.7	ug/L	20	16.9	79 - 123
Tetrachloroethene	111	ug/L	20	22.1	72 - 124
Toluene	116	ug/L	20	23.2	80 - 125
Total Xylenes	101	ug/L	60	60.9	79 - 125
Trichlorofluoromethane	83.5	ug/L	20	16.7	38 - 123
Vinyl Acetate	91.5	ug/L	20	18.3	58 - 136
Vinyl Chloride	71	ug/L	20	14.2	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.2	78 - 125
cis-1,3-Dichloropropene	99.3	ug/L	20	19.9	81 - 121
mp-Xylene	109	ug/L	40	43.7	79 - 125
n-Butylbenzene	104	ug/L	20	20.8	71 - 130
n-Propylbenzene	92	ug/L	20	18.4	74 - 122
o-Chlorotoluene	88.6	ug/L	20	17.7	78 - 126
o-Xylene	85.9	ug/L	20	17.2	79 - 124
p-Chlorotoluene	102	ug/L	20	20.4	78 - 125
p-Isopropyltoluene	90.9	ug/L	20	18.2	72 - 123
sec-Butylbenzene	97.1	ug/L	20	19.4	72 - 127
tert-Amyl methyl ether	84.5	ug/L	20	16.9	75 - 121
tert-Butyl Alcohol	81.4	ug/L	100	81.4	17 - 168
tert-Butylbenzene	92.3	ug/L	20	18.5	72 - 124
trans-1,2-Dichloroethene	101	ug/L	20	20.2	71 - 122
trans-1,3-Dichloropropene	105	ug/L	20	20.9	78 - 126
1,2-Dichloroethane-d4 (S)	84.8	%			62 - 133
4-Bromofluorobenzene (S)	94.8	%			79 - 114
Dibromofluoromethane (S)	83	%			78 - 116
Toluene-d8 (S)	97.1	%			76 - 127

MATRIX SPIKE: 2771691 DUPLICATE: 2771692 ORIGINAL: 2323597001

****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: 2323127 ALG002|LMC MRC

1,2,4-Trimethylbenzene	0	ug/L	20	19.2979	19.2682	96.5	96.3	76 - 125	.15	24
Benzene	0	ug/L	20	21.7085	21.755	109	109	80 - 124	.21	26
Ethylbenzene	0	ug/L	20	21.341	21.4698	107	107	80 - 124	.6	19
Isopropylbenzene	0	ug/L	20	21.7094	22.4	109	112	73 - 129	3.13	18
Methyl t-Butyl Ether	0	ug/L	20	17.5283	17.7216	87.6	88.6	69 - 115	1.1	20
Naphthalene	0	ug/L	20	14.1073	13.8638	70.5	69.3	56 - 134	1.74	40
Toluene	0	ug/L	20	22.9594	22.5143	115	113	80 - 125	1.96	20
1,2-Dichloroethane-d4 (S)	87.1	%				87.1	93.6	62 - 133		
4-Bromofluorobenzene (S)	96.9	%				96.9	96.7	79 - 114		
Dibromofluoromethane (S)	83.7	%				83.7	84.8	78 - 116		
Toluene-d8 (S)	86.3	%				86.3	87	76 - 127		

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47346 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127015

METHOD BLANK: 2771849

Parameter	Blank Result	Units	Reporting Limit
1,2-Dichloroethene, Total	ND	ug/L	2.0
Trichloroethene	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
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
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
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	1.1J	ug/L	5.0
Isopropylbenzene	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
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.2	%	62 - 133
4-Bromofluorobenzene (S)	93.5	%	79 - 114
Dibromofluoromethane (S)	81.8	%	78 - 116
Toluene-d8 (S)	87.7	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2771850

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dichloroethene, Total	103	ug/L	40	41.2	78 - 125
Trichloroethene	107	ug/L	20	21.3	77 - 124
cis-1,2-Dichloroethene	103	ug/L	20	20.5	78 - 125
1,1,1,2-Tetrachloroethane	102	ug/L	20	20.4	78 - 121
1,1,1-Trichloroethane	113	ug/L	20	22.7	66 - 130
1,1,2,2-Tetrachloroethane	91.8	ug/L	20	18.4	74 - 135
1,1,2-Trichloroethane	91.1	ug/L	20	18.2	82 - 126
1,1-Dichloroethane	98.1	ug/L	20	19.6	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.9	63 - 128
1,2,3-Trichlorobenzene	66.2	ug/L	20	13.2	61 - 126
1,2,3-Trichloropropane	98.3	ug/L	20	19.7	75 - 132
1,2,4-Trichlorobenzene	79.3	ug/L	20	15.9	67 - 123
1,2,4-Trimethylbenzene	94.6	ug/L	20	18.9	76 - 125
1,2-Dibromo-3-chloropropane	70.2	ug/L	20	14.0	59 - 133
1,2-Dibromoethane	97.9	ug/L	20	19.6	80 - 124
1,2-Dichlorobenzene	99.8	ug/L	20	20.0	82 - 118
1,2-Dichloroethane	103	ug/L	20	20.6	70 - 133
1,2-Dichloropropane	99.1	ug/L	20	19.8	81 - 127
1,3-Dichlorobenzene	101	ug/L	20	20.1	81 - 118
1,3-Dichloropropane	94.2	ug/L	20	18.8	82 - 126
1,3-Dichloropropene, Total	94.1	ug/L	40	37.6	80 - 123
1,4-Dichlorobenzene	95.2	ug/L	20	19.0	81 - 116
2,2-Dichloropropane	124	ug/L	20	24.8	64 - 129
2-Butanone	104	ug/L	100	104	50 - 152
2-Chloroethylvinyl ether	70.7	ug/L	20	14.1	1 - 150
2-Hexanone	101	ug/L	100	101	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.5	ug/L	100	82.5	71 - 146
Acetone	139	ug/L	100	139	40 - 151
Benzene	100	ug/L	20	20.1	80 - 124
Bromobenzene	106	ug/L	20	21.2	81 - 119
Bromochloromethane	102	ug/L	20	20.4	73 - 117
Bromodichloromethane	97.5	ug/L	20	19.5	79 - 126
Bromoform	80.3	ug/L	20	16.1	70 - 123
Bromomethane	83.9	ug/L	20	16.8	45 - 148
Carbon Disulfide	99.1	ug/L	20	19.8	57 - 131
Carbon Tetrachloride	110	ug/L	20	22.0	62 - 132
Chlorobenzene	95.2	ug/L	20	19.0	85 - 117
Chlorodibromomethane	88.7	ug/L	20	17.7	77 - 122
Chloroethane	93	ug/L	20	18.6	51 - 142
Chloroform	105	ug/L	20	21.0	78 - 122
Chloromethane	68.8	ug/L	20	13.8	38 - 156

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Cyclohexane	110	ug/L	20	22.1	66 - 130
Dibromomethane	97.1	ug/L	20	19.4	81 - 125
Dichlorodifluoromethane	64.5	ug/L	20	12.9	17 - 166
Diisopropyl ether	88.7	ug/L	20	17.7	74 - 131
Ethyl tert-butyl ether	87.3	ug/L	20	17.5	75 - 123
Ethylbenzene	105	ug/L	20	21.0	80 - 124
Freon 113	125	ug/L	20	25.0	50 - 130
Hexachlorobutadiene	106	ug/L	20	21.2	55 - 128
Isopropylbenzene	105	ug/L	20	21.0	73 - 129
Methyl acetate	95.7	ug/L	20	19.1	70 - 130
Methyl cyclohexane	94.9	ug/L	20	19.0	70 - 130
Methyl t-Butyl Ether	91.5	ug/L	20	18.3	69 - 115
Methylene Chloride	101	ug/L	20	20.3	76 - 121
Naphthalene	63.9	ug/L	20	12.8	56 - 134
Styrene	94.5	ug/L	20	18.9	79 - 123
Tetrachloroethene	103	ug/L	20	20.6	72 - 124
Toluene	105	ug/L	20	21.1	80 - 125
Total Xylenes	105	ug/L	60	63.1	79 - 125
Trichlorofluoromethane	92.7	ug/L	20	18.5	38 - 123
Vinyl Acetate	91	ug/L	20	18.2	58 - 136
Vinyl Chloride	77	ug/L	20	15.4	27 - 138
cis-1,3-Dichloropropene	92.2	ug/L	20	18.4	81 - 121
mp-Xylene	112	ug/L	40	44.8	79 - 125
n-Butylbenzene	111	ug/L	20	22.2	71 - 130
n-Propylbenzene	97.6	ug/L	20	19.5	74 - 122
o-Chlorotoluene	96.9	ug/L	20	19.4	78 - 126
o-Xylene	91.7	ug/L	20	18.3	79 - 124
p-Chlorotoluene	113	ug/L	20	22.5	78 - 125
p-Isopropyltoluene	98.5	ug/L	20	19.7	72 - 123
sec-Butylbenzene	105	ug/L	20	21.0	72 - 127
tert-Amyl methyl ether	87.7	ug/L	20	17.5	75 - 121
tert-Butyl Alcohol	84.4	ug/L	100	84.4	17 - 168
tert-Butylbenzene	98.9	ug/L	20	19.8	72 - 124
trans-1,2-Dichloroethene	103	ug/L	20	20.6	71 - 122
trans-1,3-Dichloropropene	96	ug/L	20	19.2	78 - 126
1,2-Dichloroethane-d4 (S)	90.7	%			62 - 133
4-Bromofluorobenzene (S)	97.8	%			79 - 114
Dibromofluoromethane (S)	85.7	%			78 - 116
Toluene-d8 (S)	84.9	%			76 - 127

MATRIX SPIKE: 2772130 DUPLICATE: 2772131 ORIGINAL: 2323941002

****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: 2323127 ALG002|LMC MRC

1,2,4-Trimethylbenzene	0	ug/L	20	17.7285	18.3424	88.6	91.7	76 - 125	3.4	24
Benzene	0	ug/L	20	21.7427	21.2188	109	106	80 - 124	2.44	26
Ethylbenzene	0	ug/L	20	21.014	20.5509	105	103	80 - 124	2.23	19
Isopropylbenzene	0	ug/L	20	20.1222	20.4566	101	102	73 - 129	1.65	18
Methyl t-Butyl Ether	0	ug/L	20	17.9906	16.3447	90	81.7	69 - 115	9.59	20
Naphthalene	0	ug/L	20	9.46996	11.5804	47.3*	57.9	56 - 134	20.1	40
Toluene	0	ug/L	20	23.7725	22.1399	119	111	80 - 125	7.11	20
1,2-Dichloroethane-d4 (S)	90.6	%				90.6	90.6	62 - 133		
4-Bromofluorobenzene (S)	93.8	%				93.8	93.7	79 - 114		
Dibromofluoromethane (S)	83.1	%				83.1	83.4	78 - 116		
Toluene-d8 (S)	91	%				91	87	76 - 127		

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2323127 ALG002|LMC MRC

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2770697	1	Lab Control Standard	SW846 8260B	Vinyl Acetate
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 143 and the control limits were 58 to 136.				
2770697	2	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 132 and the control limits were 66 to 130.				
2770697	3	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 122 and the control limits were 76 to 121.				
2770697	4	Lab Control Standard	SW846 8260B	Ethyl tert-butyl ether
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Ethyl tert-butyl ether. The % Recovery was reported as 126 and the control limits were 75 to 123.				
2770697	5	Lab Control Standard	SW846 8260B	Bromochloromethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 121 and the control limits were 73 to 117.				
2770697	6	Lab Control Standard	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type LCS for method SW846 8260B 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.				
2770697	7	Lab Control Standard	SW846 8260B	Tetrachloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 127 and the control limits were 72 to 124.				
2770697	8	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 139 and the control limits were 70 to 130.				
2770697	9	Lab Control Standard	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2770697	10	Lab Control Standard	SW846 8260B	Chloroethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Chloroethane. The % Recovery was reported as 170 and the control limits were 51 to 142.				
2770697	11	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 160 and the control limits were 50 to 130.				
2770697	12	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2323127001	MRC-SW16A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127002	MRC-SW15A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127006	MRC-SW2A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127007	MRC-SW1A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127009	MRC-MW11A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127010	MRC-MW16A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127011	MRC-MW16A-DUP	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127012	MRC-MW17A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127013	MRC-MW17A DUP	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127014	EW-2	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127015	EW-1	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127011	MRC-MW16A-DUP	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30949
2323127010	MRC-MW16A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30953
2323127009	MRC-MW11A	SW846 7470A	MDIG/72452	SW846 7470A	META/62650
2323127009	MRC-MW11A	SW846 3015	MDIG/72465	SW846 6020A	META/62728
2323127001	MRC-SW16A			SW846 8260B	VOMS/47322
2323127002	MRC-SW15A			SW846 8260B	VOMS/47322
2323127003	MRC-SW5A2			SW846 8260B	VOMS/47322
2323127004	MRC-SW5A1			SW846 8260B	VOMS/47322
2323127005	MRC-SW5B			SW846 8260B	VOMS/47322
2323127006	MRC-SW2A			SW846 8260B	VOMS/47322
2323127007	MRC-SW1A			SW846 8260B	VOMS/47322
2323127008	TB-0626-18			SW846 8260B	VOMS/47322
2323127009	MRC-MW11A			SW846 8260B	VOMS/47322
2323127010	MRC-MW16A			SW846 8260B	VOMS/47322
2323127011	MRC-MW16A-DUP			SW846 8260B	VOMS/47322
2323127012	MRC-MW17A			SW846 8260B	VOMS/47323
2323127013	MRC-MW17A DUP			SW846 8260B	VOMS/47323

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2323127015	EW-1			SW846 8260B	VOMS/47323
2323127014	EW-2			SW846 8260B	VOMS/47326
2323127014	EW-2			SW846 8260B	VOMS/47336
2323127015	EW-1			SW846 8260B	VOMS/47346

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.

Courier:

Tracking #:

23231127

Co. Name: AECOM

Contact (Report to): Ravi Damera Phone: 301-674-3199

Address: 12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Bill to (if different than Report to): PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y ravi.damera@aecom.com

Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	ANALYSES/METHOD REQUESTED: VOC (8260C)	1,4-Dioxane (8270 SIM)	Enter Number of Containers Per Analysis	Container Type	Container Size	Preservative
1 MRC-SW16A	SW=Surface H2O	6/25/18	1430	G	SW	X	2	→ rec'd HCl. VIALS + AIL @ 6/26			
2 MRC-SW15A		6/25/18	1445	G	SW	2	2				
3 MRC-SW5A2		6/25/18	1500	G	SW	2					
4 MRC-SW5A1		6/25/18	1505	G	SW	2					
5 MRC-SW5B		6/25/18	1515	G	SW	2					
6 MRC-SW2A		6/25/18	1530	G	SW	2	2				
7 MRC-SW1A		6/25/18	1545	G	SW	2	2				
8 TB-062518		6/25/18	—	G	W	2					

(completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 3.2

Therm. ID: 402

No. of Coolers:

Notes:

Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
Y	Y	Y	Y	

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Label's complete/accurate?	Container in good condition?
N	N	N	N	N
N	N	N	N	N

SAMPLED BY (Please Print): Victoria Kirkpatrick

Project Comments: Also email holly.brown@aecom.com and naoum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] AECOM	6-26-18	1600	2 [illegible]	6/26	1600
3 [illegible]	6/26	1735	4	6/26	1830
5	6/26	2130	6 M Rowfaw	6/27/18	0130
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

EDDs Required? [X] If yes, format type: EQuIS.csv

SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ] yes [ ] ⇨ Enter PWS ID No.

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ] Other

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

*G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

gd / set up 2-07

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.

Courier:

Tracking #:

SOC# 3127

Co. Name: AECOM

Contact (Report to): Ravi Damera Phone: 301-674-3199

Address: 12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Bill to (if different than Report to): PO#: 95840Acm

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] Y ravi.damera@aecom.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOC (8260C)	1,4-Dioxane (8270 SIM)	Metals	PCBs	Enter Number of Containers Per Analysis
1 MRC-MW11A	GW = groundwater	6/25/18	1400	G	GW	2	2	1	1	broken bottle @ ARA
2 MRC-MW16A	+ extra volume for MS/MSD	6/25/18	1530	G	GW	6	6			
3 MRC-MW16A-DUP		6/25/18	1550	G	GW	2	2			
4 MRC-SW17A	+ extra volume for MS/MSD	6/26/18	1010	G	SW	6	6			
5 MRC-SW17A-DUP		6/26/18	1045	G	SW	2	2			
6 EW-2		6/26/18	1105	G	GW	2	2		2	
7 EW-1		6/26/18	1320	G	GW	2	2		2	
8										

***Container Type	CG	AG	P							
***Container Size	40ml	1L	250ml							
*** Preservative	HCl	—	HNO3							

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Sample Receipt)
Received by: ARA
Cooler Temp: 3.0
Therm. ID: 402
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
#	#	#	#	#	
	Y	Y	Y	Y	
#	#	#	#	#	#
	Y	Y	Y	Y	Y

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
#	#	#	#	#	#
	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): ~~Eric~~ Antonio Zarelli

Project Comments: Please also email holly.brown@aecom.com and naoum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	6/26	1600	2	6/26	1600
3	6/26	1735	4	6/26	1835
5	6/26	2130	6 M.Kouyaw	6/26/18	2130
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS 1.CSV Other

Enter PWS ID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* 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

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

July 18, 2018

Service Request No:R1806157

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2323127

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory June 29, 2018
For your reference, these analyses have been assigned our service request number **R1806157.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2323127
Sample Matrix: Water

Service Request: R1806157
Date Received: 06/29/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 06/29/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 07/13/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
Method 680, 07/09/2018: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. Additional analysis of R1806157-001 could not be performed because insufficient sample remained for testing. Sample R1806157-002 was re-extracted out of holding time. The spikes for the re-extracted sample also failed recoveries low. The analytes affected are flagged in the LCS Summary.

Approved by _____ Date 07/13/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2323127-015			Lab ID: R1806157-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0035	J	0.0016	0.0051	ug/L	680
Trichlorobiphenyls, Total	0.0056		0.0022	0.0051	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US
Project: UR115: 2323127

Service Request: R1806157

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1806157-001	2323127-014	6/26/2018	1105
R1806157-002	2323127-015	6/26/2018	1320

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

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

COC #:	1 of 2
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2323127

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 7/10/2018 Approved By:

Email? [ ] Y

Fax? [ ] Y No.:

Container Type: AN
Container Size: 1 L
Preservative: None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.	Sample/COC Comments
1 2323127 014	6/26/18	1105	G	WT	2	*	
2 2323127 015	6/26/18	1320	G	WT	2	*	Sub to ALS Rochester
3							
4							
5							
6							
7							
8							
9							
10							

Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

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: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other:

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/26/18	1445	2	6/28/18	1235
3			4		
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:

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

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

R1806157 5
ALS Environmental
UR115: 2323127

Cooler Receipt and Preservation Check Form

R1806157 5
ALS Environmental
UR116: 2323127

Project/Client ALS-MOT Folder Number R1806157

Cooler received on 6/29/18 by: @ COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	Y (N) *	6	Where did the bottles originate? ALS/ROC (CLIENT)	
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set (NA)	

8. Temperature Readings Date: 6/29/18 Time: 1245 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	2.9						
Correction Factor (°C)	–						
Corrected Temp (°C)	2.9						
Temp from:Type of bottle	–						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ (Ice melted) Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by e on 6/29/18 at 1250
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 7-2-18 Time: 13:30 by: RE

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: Client bottles
Explain all Discrepancies/ Other Comments:

* Samples packed in cooler w/o bubble wrap
014 – 1 ember broke

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: RE
PC Secondary Review: [signature] 7/5/18 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2323127

Service Request: R1806157

Sample Name: 2323127 014
Lab Code: R1806157-001
Sample Matrix: Water

Date Collected: 06/26/18
Date Received: 06/29/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2323127 015
Lab Code: R1806157-002
Sample Matrix: Water

Date Collected: 06/26/18
Date Received: 06/29/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-C
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

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Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	06/26/18 11:05
Sample Matrix:	Water	**Date Received:**	06/29/18 12:35
Sample Name:	2323127 014	**Units:**	ug/L
Lab Code:	R1806157-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.024 U	0.024	0.012	1	07/09/18 13:17	7/3/18	
Dichlorobiphenyls, Total	0.0047 U	0.0047	0.0016	1	07/09/18 13:17	7/3/18	
Heptachlorobiphenyls, Total	0.014 U	0.014	0.0090	1	07/09/18 13:17	7/3/18	
Hexachlorobiphenyls, Total	0.0094 U	0.0094	0.0047	1	07/09/18 13:17	7/3/18	
Monochlorobiphenyls, Total	0.0047 U	0.0047	0.00059	1	07/09/18 13:17	7/3/18	
Nonachlorobiphenyls, Total	0.019 U	0.019	0.0088	1	07/09/18 13:17	7/3/18	
Octachlorobiphenyls, Total	0.014 U	0.014	0.0099	1	07/09/18 13:17	7/3/18	
Pentachlorobiphenyls, Total	0.0094 U	0.0094	0.0043	1	07/09/18 13:17	7/3/18	
Tetrachlorobiphenyls, Total	0.0094 U	0.0094	0.0023	1	07/09/18 13:17	7/3/18	
Trichlorobiphenyls, Total	0.0047 U	0.0047	0.0022	1	07/09/18 13:17	7/3/18	
Total PCBs as Sum of Homologs	0.024 U	0.024	-	1	07/09/18 13:17	7/3/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	39	55 - 133	07/09/18 13:17	
4,4'-DDT	93	57 - 200	07/09/18 13:17	

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	06/26/18 13:20
Sample Matrix:	Water	**Date Received:**	06/29/18 12:35
Sample Name:	2323127 015	**Units:**	ug/L
Lab Code:	R1806157-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.024 U	0.024	0.012	1	07/09/18 13:46	7/3/18	
Dichlorobiphenyls, Total	0.0047 U	0.0047	0.0016	1	07/09/18 13:46	7/3/18	
Heptachlorobiphenyls, Total	0.014 U	0.014	0.0090	1	07/09/18 13:46	7/3/18	
Hexachlorobiphenyls, Total	0.0094 U	0.0094	0.0047	1	07/09/18 13:46	7/3/18	
Monochlorobiphenyls, Total	0.0047 U	0.0047	0.00059	1	07/09/18 13:46	7/3/18	
Nonachlorobiphenyls, Total	0.019 U	0.019	0.0088	1	07/09/18 13:46	7/3/18	
Octachlorobiphenyls, Total	0.014 U	0.014	0.0099	1	07/09/18 13:46	7/3/18	
Pentachlorobiphenyls, Total	0.0094 U	0.0094	0.0043	1	07/09/18 13:46	7/3/18	
Tetrachlorobiphenyls, Total	0.0094 U	0.0094	0.0023	1	07/09/18 13:46	7/3/18	
Trichlorobiphenyls, Total	0.0047 U	0.0047	0.0022	1	07/09/18 13:46	7/3/18	
Total PCBs as Sum of Homologs	0.024 U	0.024	-	1	07/09/18 13:46	7/3/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	50	55 - 133	07/09/18 13:46	
4,4'-DDT	57	57 - 200	07/09/18 13:46	

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	06/26/18 13:20
Sample Matrix:	Water	**Date Received:**	06/29/18 12:35
Sample Name:	2323127 015	**Units:**	ug/L
Lab Code:	R1806157-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.025 U	0.025	0.012	1	07/13/18 07:55	7/11/18	*
Dichlorobiphenyls, Total	**0.0035 J**	0.0051	0.0016	1	07/13/18 07:55	7/11/18	*
Heptachlorobiphenyls, Total	0.015 U	0.015	0.0090	1	07/13/18 07:55	7/11/18	*
Hexachlorobiphenyls, Total	0.010 U	0.010	0.0047	1	07/13/18 07:55	7/11/18	*
Monochlorobiphenyls, Total	0.0051 U	0.0051	0.00060	1	07/13/18 07:55	7/11/18	*
Nonachlorobiphenyls, Total	0.020 U	0.020	0.0089	1	07/13/18 07:55	7/11/18	*
Octachlorobiphenyls, Total	0.015 U	0.015	0.010	1	07/13/18 07:55	7/11/18	*
Pentachlorobiphenyls, Total	0.010 U	0.010	0.0043	1	07/13/18 07:55	7/11/18	*
Tetrachlorobiphenyls, Total	0.010 U	0.010	0.0024	1	07/13/18 07:55	7/11/18	*
Trichlorobiphenyls, Total	**0.0056**	0.0051	0.0022	1	07/13/18 07:55	7/11/18	*
Total PCBs as Sum of Homologs	0.025 U	0.025	-	1	07/13/18 07:55	7/11/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	105	55 - 133	07/13/18 07:55	
4,4'-DDT	99	57 - 200	07/13/18 07:55	

QC Summary Forms

ALS Environmental Rochester Laboratory
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Semivolatile Organic Compounds by GC/MS

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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1806157
Project: UR115: 2323127
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	gamma-BHC (Lindane) 55-133	4,4'-DDT 57-200
2323127 014	R1806157-001	89	93
2323127 015	R1806157-002	60	57
2323127 015 RE	R1806157-002	105	99
Method Blank	RQ1806671-01	92	108
Method Blank	RQ1806951-01	75	92
Lab Control Sample	RQ1806671-02	76	90
Duplicate Lab Control Sample	RQ1806671-03	83	97
Lab Control Sample	RQ1806951-02	68	91
Duplicate Lab Control Sample	RQ1806951-03	77	99

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1806671-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.025 U	0.025	0.012	1	07/09/18 12:20	7/3/18	
Dichlorobiphenyls, Total	0.0050 U	0.0050	0.0016	1	07/09/18 12:20	7/3/18	
Heptachlorobiphenyls, Total	0.015 U	0.015	0.0090	1	07/09/18 12:20	7/3/18	
Hexachlorobiphenyls, Total	0.010 U	0.010	0.0047	1	07/09/18 12:20	7/3/18	
Monochlorobiphenyls, Total	0.0050 U	0.0050	0.00059	1	07/09/18 12:20	7/3/18	
Nonachlorobiphenyls, Total	0.020 U	0.020	0.0088	1	07/09/18 12:20	7/3/18	
Octachlorobiphenyls, Total	0.015 U	0.015	0.0099	1	07/09/18 12:20	7/3/18	
Pentachlorobiphenyls, Total	0.010 U	0.010	0.0043	1	07/09/18 12:20	7/3/18	
Tetrachlorobiphenyls, Total	0.010 U	0.010	0.0023	1	07/09/18 12:20	7/3/18	
Trichlorobiphenyls, Total	0.0050 U	0.0050	0.0022	1	07/09/18 12:20	7/3/18	
Total PCBs as Sum of Homologs	0.025 U	0.025	-	1	07/09/18 12:20	7/3/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	92	55 - 133	07/09/18 12:20	
4,4'-DDT	108	57 - 200	07/09/18 12:20	

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1806951-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.025 U	0.025	0.012	1	07/13/18 07:27	7/11/18	
Dichlorobiphenyls, Total	0.0050 U	0.0050	0.0016	1	07/13/18 07:27	7/11/18	
Heptachlorobiphenyls, Total	0.015 U	0.015	0.0090	1	07/13/18 07:27	7/11/18	
Hexachlorobiphenyls, Total	0.010 U	0.010	0.0047	1	07/13/18 07:27	7/11/18	
Monochlorobiphenyls, Total	0.0050 U	0.0050	0.00059	1	07/13/18 07:27	7/11/18	
Nonachlorobiphenyls, Total	0.020 U	0.020	0.0088	1	07/13/18 07:27	7/11/18	
Octachlorobiphenyls, Total	0.015 U	0.015	0.0099	1	07/13/18 07:27	7/11/18	
Pentachlorobiphenyls, Total	0.010 U	0.010	0.0043	1	07/13/18 07:27	7/11/18	
Tetrachlorobiphenyls, Total	0.010 U	0.010	0.0023	1	07/13/18 07:27	7/11/18	
Trichlorobiphenyls, Total	0.0050 U	0.0050	0.0022	1	07/13/18 07:27	7/11/18	
Total PCBs as Sum of Homologs	0.025 U	0.025	-	1	07/13/18 07:27	7/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	75	55 - 133	07/13/18 07:27	
4,4'-DDT	92	57 - 200	07/13/18 07:27	

Client: ALS Environmental - US
Project: UR115: 2323127
Sample Matrix: Water

Service Request: R1806157
Date Analyzed: 07/09/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1806671-02			Duplicate Lab Control Sample RQ1806671-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.342	1.25	27 *	0.414	1.25	33	29-162	19	30
Dichlorobiphenyls, Total	680	0.174	0.250	69	0.184	0.250	73	37-139	6	30
Heptachlorobiphenyls, Total	680	0.362	0.750	48 *	0.413	0.750	55	53-120	13	30
Hexachlorobiphenyls, Total	680	0.287	0.500	57	0.329	0.500	66	11-160	14	30
Monochlorobiphenyls, Total	680	0.151	0.250	60	0.155	0.250	62	34-137	3	30
Octachlorobiphenyls, Total	680	0.311	0.750	41 *	0.368	0.750	49 *	57-125	17	30
Pentachlorobiphenyls, Total	680	0.350	0.500	70	0.385	0.500	77	10-180	10	30
Tetrachlorobiphenyls, Total	680	0.326	0.500	65	0.355	0.500	71	14-153	9	30
Trichlorobiphenyls, Total	680	0.179	0.250	71	0.190	0.250	76	10-173	6	30

Client: ALS Environmental - US
Project: UR115: 2323127
Sample Matrix: Water

Service Request: R1806157
Date Analyzed: 07/13/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1806951-02			Duplicate Lab Control Sample RQ1806951-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.392	1.25	31	0.401	1.25	32	29-162	2	30
Dichlorobiphenyls, Total	680	0.144	0.250	57	0.167	0.250	67	37-139	15	30
Heptachlorobiphenyls, Total	680	0.369	0.750	49 *	0.385	0.750	51 *	53-120	4	30
Hexachlorobiphenyls, Total	680	0.281	0.500	56	0.305	0.500	61	11-160	8	30
Monochlorobiphenyls, Total	680	0.122	0.250	49	0.144	0.250	58	34-137	17	30
Octachlorobiphenyls, Total	680	0.353	0.750	47 *	0.361	0.750	48 *	57-125	2	30
Pentachlorobiphenyls, Total	680	0.329	0.500	66	0.356	0.500	71	10-180	8	30
Tetrachlorobiphenyls, Total	680	0.269	0.500	54	0.300	0.500	60	14-153	11	30
Trichlorobiphenyls, Total	680	0.146	0.250	58	0.163	0.250	65	10-173	11	30