2020 ANNUAL GROUNDWATER MONITORING REPORT

Hunting Ridge Construction and Demolition Debris Landfill

6801 East New Market Ellwood Road

Hurlock, Maryland

January 2021

PREPARED FOR

Waste Management of Maryland, Inc.

PREPARED BY

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ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
bgs	below ground surface
cm/s	centimeters per second
ft/ft	feet per foot
MDE	Maryland Department of Environment
mg/L	milligrams per liter
ORP	oxidation reduction potential
%	percent
PQL	Practical Quantitation Limit
QA/QC	quality assurance/quality control
Site	Hunting Ridge Construction and Demolition Debris Landfill
TestAmerica	Eurofins TestAmerica Laboratories, Inc.
Tetra Tech	Tetra Tech, Inc.
VOCs	volatile organic compounds
Waste Management	Waste Management of Maryland, Inc.

1.0 INTRODUCTION

1.1 SCOPE AND PURPOSE

Tetra Tech, Inc. (Tetra Tech) has prepared the following Annual Groundwater Monitoring Report on behalf of Waste Management of Maryland, Inc. (Waste Management) for the closed Hunting Ridge Construction and Demolition Debris Landfill located at 6801 East New Market Ellwood Road in Hurlock, Maryland (the Site; **Figure 1**). This report summarizes inspection and monitoring activities completed at the Site in 2020, including quarterly post-closure site inspection, and semi-annual groundwater monitoring and surface water sampling.

Semi-annual groundwater monitoring and surface water sampling were conducted at the Site on March 24 and September 9, 2020 per the requirements listed in Maryland Department of the Environment (MDE) Refuse Disposal Permit No. 91-09-12-04D, dated May 23, 1991; MDE Groundwater Discharge Permit No. 2016-GWD-2090, dated December 28, 2016; and Title 26, Subtitle 9, Chapter 7 of the Code of Maryland Regulations (COMAR). All groundwater monitoring and surface water sampling activities were performed in accordance with the July 2012 *Site-Specific Groundwater & Surface Water Monitoring Plan* (Normandeau Associates, Inc., 2012).

1.2 BACKGROUND/SITE HISTORY

1.2.1 Overview/Site Description

The Site is a closed construction and demolition debris landfill located in Hurlock, Dorchester County, Maryland consisting of approximately 44 total acres of land with a 16-acre capped disposal area. The Site is vehicle-accessible via an unpaved road off Maryland Route 16 (East New Market Ellwood Road). Additionally, several small gates provide foot access from adjoining properties. The Site is bounded to the north by the Dorchester County Landfill, to the east by undeveloped land, and to the south and west Maple Breeze Farm. The Site is free of karst features (underground drainage systems such as sinkholes), rock outcrops, and utility infrastructure. An unnamed stream borders the Site to the east and is the source of the two surface water samples collected as part of the semi-annual sampling program.

1.2.2 Site History

The Site was used as a tree farm until the early 1980s, when it began operation as a sand and gravel mine. In May 1991 following the completion of mining activities, Refuse Disposal Permit No. 91-09-12-04D was obtained from the State of Maryland to infill the sand and gravel pits. Waste Management subsequently assumed ownership of the Site and began clearing and excavating various areas for refuse disposal. In July 1991, the Site began accepting bulk waste (e.g. large appliances) and construction, demolition, and land clearing debris under the name, Waste Management of Cambridge, Inc. Rubble Landfill. Per MDE active landfill requirements, groundwater monitoring wells were installed at the Site from August to September 1991. Additionally, in September 1991, Waste Management changed the name of the Site to Hunting Ridge Construction and Demolition Debris Landfill. The Site was subsequently closed on January 16, 1998.

1.3 GEOLOGIC AND HYDROGEOLOGIC SETTING

1.3.1 Site Geology

According to the Maryland Geological Survey (2016), the Site and surrounding area are located in the Atlantic Coastal Plain Province, which is underlain by "unconsolidated sediments, including gravel, sand, silt, and clay, which overlaps the rocks of the eastern Piedmont". Soil borings conducted at the Site in 1980 and 1991 identified soils from the Pensauken Formation of the Columbia Group (Applied Testing and Geosciences, LLC, January 2014). These included brown, gray, and red-orange gravelly sand, sand, and silty sand with intermittent thin clay and silt lenses. Weathered cobbles of arkosic greywacke and sandstone were also reportedly encountered. Surficial soils encountered during the 1980 and 1981 soil boring events primarily consisted of red-orange and orange-brown, mottled, fine-to-coarse-grained, poorly-graded sands.

The United States Department of Agriculture Soil Survey (2016) indicates that the surficial soil composition of the Site and surrounding areas is approximately 65 percent (%) sandy loam, 25% loamy sand, and 10% loam. A regional geologic cross-section is presented on **Figure 2**.

1.3.2 Regional Hydrogeology

The uppermost aquifer in Dorchester County is the Columbia Aquifer, which is a major source of water for both agricultural and domestic wells in the area. This aquifer consists of groundwater occupying the intergranular voids in the sand and gravel deposits of the Columbia Group. The Columbia Aquifer ranges in thickness from 30 feet to 120 feet, with the thickest areas corresponding to paleochannel features. Groundwater flow in the upper 20 feet of the aquifer is reportedly localized, following surface topography. The Columbia Aquifer discharges to low-lying areas and streams and is recharged by precipitation (Applied Testing & Geosciences, LLC, January 2014).

1.3.3 Site Stratigraphy and Hydraulic Conductivity

According to the 2013 Annual Groundwater Monitoring Report submitted to the MDE by Applied Testing & Geosciences, LLC in January 2014, hydraulic conductivity tests were performed in various areas of the Site using either the slug test procedure or by monitoring water levels after pouring deionized water into a nearby piezometer. Based on the results of these tests, hydraulic conductivity at the Site ranges from 4.0×10^{-5} to 1.0×10^{-3} centimeters per second cm/s, with a median result of 2.1×10^{-4} cm/s. This is consistent with the reported range of 10^{-5} to 10^{-1} cm/s for silty sand.

The St. Mary's Formation of the Chesapeake Group represents the underlying confining unit for the Columbia Aquifer, and is characterized by orange-to-gray gravelly clay soils with marine animal shells (marine clay). The estimated range of hydraulic conductivity for marine clay is 10^{-10} to 10^{-7} cm/s. The St. Mary's Formation reportedly runs laterally beneath the Site at thicknesses of greater than 30 feet, separating the Columbia Aquifer from deeper aquifers.

1.3.4 Groundwater Gradient and Flow Velocities

Groundwater flow velocity at the Site was calculated using hydraulic gradients determined from groundwater elevation data, along with the hydraulic conductivity values discussed above. Based on these data, groundwater at the Site generally flows to the northeast with horizontal gradients ranging from 0.003 to 0.005 feet per foot (ft/ft). Vertical gradients determined from groundwater elevation data were 0.006 ft/ft downward in the southwest corner of the Site, 0.003 ft/ft upward near the unnamed stream along the eastern Site boundary, and 0.006 ft/ft upward near the center of the northeastern Site boundary (Applied Testing & Geosciences, LLC, January 2014). These values are consistent with a northeasterly groundwater flow direction with recharge in the upland areas and discharge in the low-lying areas of the Site. Based on the median hydraulic conductivity value of 2.1×10^{-4} cm/s obtained from slug testing, an estimated porosity value of 0.26, and an average horizontal gradient of 0.004 ft/ft, the average linear groundwater flow velocity at the Site is 1.1×10^{-7} feet per second (0.009 feet per day), or approximately 3.3 feet per year.

1.3.5 Conceptual Groundwater Flow Model

Groundwater flows in a northeasterly direction at the Site from a topographically high area to the southwest toward Gravel Run and the unnamed stream that forms the eastern Site boundary. Depth to groundwater in the Columbia Aquifer ranges from approximately 18 to 25 feet above mean sea level or approximately 10 to 24 feet below ground surface (bgs). This level is generally higher at the southwest corner of the Site and slopes gradually to the north and northeast. Vertical gradients are downward in the southwest corner of the Site and upward near the northeastern and southeastern Site boundaries, consistent with groundwater flow direction.

2.0 MONITORING AND INSPECTION PROGRAMS

2.1 VISUAL INSPECTION PROGRAM

The visual inspection program consists of post-closure Site inspections conducted on a quarterly basis. These inspections include evaluations of Site access and security controls, gas vent systems, landfill cap and drainage, monitoring wells, and vegetation. Quarterly inspections were performed by Tetra Tech personnel on March 24, June 11, September 9, and December 10, 2020. Copies of the post-closure Site inspection reports are included as **Appendix A**. No significant issues were reported during the inspections. Minor depression filling, gas flare repairs, mowing, and monitoring well maintenance are completed on a regular basis.

2.2 GROUNDWATER/SURFACE WATER MONITORING PROGRAM

2.2.1 Groundwater Monitoring Wells

In 1991, six groundwater monitoring wells, ranging in depth from 17 to 27 bgs were installed at the Site: MW-1 (RHCU01), MW-2 (WHCU02), MW-3 (WHCD03), MW-4 (RHCD04), MW-5 (RHCD05), and MW-6 (RHCD06). On November 27, 2017, MW-1 was abandoned and reinstalled as MW-1R, as described below. MW-1R and MW-2 are located upgradient of the fill area and are used to provide background groundwater quality data. MW-3 through MW-6 are located downgradient of the fill area and are used to monitor potential groundwater impacts. All monitoring well and surface water monitoring locations are depicted on **Figure 3** and listed in **Table 1**.

2.2.2 Groundwater Elevation and Flow Direction

During semi-annual groundwater monitoring events, depth to groundwater is measured at each monitoring well location prior to sampling. In accordance with the procedure outlined in the July 2012 *Site-Specific Groundwater & Surface Water Monitoring Plan*, depth to groundwater is measured to the nearest hundredth of a foot using a water level indicator. Depth to groundwater measurements from the March 24, 2020 semi-annual groundwater monitoring event were used to calculate the groundwater elevations on **Figure 3**. These data indicate that groundwater flows to the northeast at the Site.

2.2.3 Semi-Annual Groundwater Sampling

Semi-annual groundwater sampling was conducted at the Site on March 24 and September 9, 2020. Per the July 2012 *Site-Specific Groundwater & Surface Water Monitoring Plan*, all monitoring wells were sampled during the March 2020 sampling event, and downgradient wells MW-3 through MW-6 were sampled during the September 2020 sampling event.

Prior to sampling, all wells were purged of approximately three well volumes of groundwater using either a submersible pump or a disposable polyethylene bailer. Groundwater quality parameters including pH, specific conductance, temperature, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were

monitored at the start of purging and after each well volume using a Horiba U-52 water quality meter. All samples were collected in laboratory-supplied containers and handled in accordance with the procedures outlined in the July 2012 *Site-Specific Groundwater & Surface Water Monitoring Plan*. The samples were then submitted to Eurofins TestAmerica Laboratories, Inc. in Buffalo, New York (TestAmerica) for analysis of the parameters listed in **Table 2**. TestAmerica is a Maryland-certified laboratory for performing environmental sample analyses for landfill sites. Copies of the groundwater sampling forms are included as **Appendix B**.

2.2.4 Semi-Annual Surface Water Sampling

Semi-annual surface water sampling was conducted at the Site on March 24 and September 9, 2020. Surface water samples were collected from the unnamed stream that runs along the eastern Site boundary. In accordance with the July 2012 *Site-Specific Groundwater & Surface Water Monitoring Plan*, one surface water sample (RHCD07) was collected from a southern, upstream location, and another surface water sample (RHCD08) was collected from a northern, downstream location. Samples were collected from the approximate midpoint of the stream, where water was free-flowing, fresh, and representative.

Groundwater quality parameters including pH, specific conductance, temperature, turbidity, DO, and ORP were collected prior to sampling using a Horiba U-52 water quality meter. All samples were collected in laboratory-supplied containers and handled in accordance with the procedures outlined in the July 2012 *Site-Specific Groundwater & Surface Water Monitoring Plan*. The samples were then submitted to TestAmerica for analysis of the parameters listed in **Table 2**. Copies of the surface water sampling forms are included in **Appendix B**.

3.0 QUALITY ASSURANCE AND QUALITY CONTROL

3.1 SAMPLE CONTAINER INSPECTION

As discussed in Section 2.2, sample containers used in the semi-annual groundwater and surface water sampling events were supplied by TestAmerica. Prior to initiating sampling activities, Tetra Tech personnel visually inspected each container for damage, and verified that container size and preservative corresponded to the analyses listed in **Table 2**.

3.2 FIELD BLANKS AND TRIP BLANKS

As part of the September 2020 semi-annual sampling event, two field blanks were collected for quality assurance/quality control (QA/QC). The field blank designated “01FB” was collected during groundwater sampling activities and field blank “02FB” was collected during surface water sampling activities. The field blanks were submitted along with groundwater and surface water samples to TestAmerica for analysis of the parameters listed in **Table 2**. Trace concentrations of calcium or sodium were detected in these samples; see **Table 3**.

Field blank samples were not collected during the March 2020 sampling event due to the laboratory not providing sufficient bottles. Trip blanks were collected during both March and September 2020 sampling events; the results indicate all analytes were non-detect.

3.3 HOLDING TIMES

All parameters, except for pH, were analyzed within their respective holding times. For pH, all samples were analyzed outside the specified holding time for laboratory pH analysis of 15 minutes. This parameter is also collected in the field at each sample location as discussed in Section 2.2.

3.4 SAMPLE SURROGATE RECOVERIES

No out of range sample surrogate recoveries were reported by the laboratory.

3.5 METHOD BLANKS

No method blank analytical or quality issues were noted in the March and September 2020 sampling events.

3.6 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL STANDARDS

Parameters reported by the laboratory out of advisory limits for initial calibration, continuing calibration, internal machine standards, or laboratory QA/QC samples are listed in the Case Narrative sections of the laboratory analytical reports included as **Appendix C**. No issues were reported.

3.7 DUPLICATE SAMPLES

No duplicate samples were collected during the March and September 2020 sampling events.

4.0 ANALYTICAL RESULTS

4.1 2020 ANALYTICAL RESULTS

Samples collected during the 2020 semi-annual groundwater and surface water sampling events were analyzed for the parameters listed in **Table 2**. The detection results from the March and September 2020 sampling events are summarized in **Tables 3** and **4**, respectively, and the laboratory analytical reports are included as **Appendix C**.

4.2 EVALUATION OF ANALYTICAL RESULTS

Analytical results from the 2020 semi-annual groundwater and surface water sampling events were evaluated using the MDE Practical Quantitation Limits (PQLs; **Table 2**) and historical data. These data were used to create time-series charts of commonly detected compounds at each monitoring well location (**Appendix D**). Piper and stiff diagrams, which represent graphical depictions of groundwater quality, were created using geochemical field parameters collected from monitoring wells MW-1 through MW-6 since 2016 and are presented as **Figures 4** and **5**. Historical groundwater analytical data collected from MW-1 through MW-6 since 1994 are included as **Appendix E**.

4.2.1 Water Quality Parameters

No unexpected geochemical signatures were noted in water quality data collected in 2020.

Nitrate remained elevated at downgradient monitoring well MW-5, at concentrations of 15.8 and 13.5 in March and September 2020, respectively. As demonstrated on the time-series chart for MW-5 in Appendix D, nitrate concentrations exhibit an overall decreasing trend since 1994.

Chloride concentrations at MW-1 through MW-6 remained relatively unchanged from 2016 except at upgradient well MW-2 where chloride has been increasing since 2016.

4.2.2 Volatile Organic Compounds

During the March 2020 sampling event, chloroform was detected in downgradient monitoring well MW-4 at an estimated concentration ("J" flag) of 0.5 µg/L and methylene chloride and methyl-tert-butyl ether were detected in downgradient monitoring well MW-5 at an estimated concentration of 0.6 µg/L. During the September 2020 sampling event, chloroform was detected in downgradient monitoring well MW-4 at an estimated concentration of 0.6 µg/L. These low-level VOC detections are below their respective MDE Cleanup Standard and likely the result of historical localized landfill gas migration or laboratory related contaminants. No other VOCs were detected in the groundwater and surface water samples collected in March and September 2020.

4.2.3 Metals

Low-level concentrations of several metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, and zinc), were again observed in several wells during both the March and September 2020 sampling events. Barium, cadmium, lead, and zinc were also detected in surface water samples collected during the March and/or September 2020 sampling events. However, these metal detections are all below their respective cleanup standards.

Manganese and iron were detected at concentrations above the MDE Cleanup Standard at several groundwater and surface water sampling locations during both the March and September 2020 sampling events, which is consistent with historical data. Both manganese and iron are naturally occurring metals common in groundwater in this area.

5.0 CONCLUSIONS

Geochemical field data collected at the Site since 1994 demonstrate that groundwater quality continues to improve over time.

Laboratory analytical results from the March and September 2020 semi-annual groundwater sampling events were consistent with historical data. These results indicate the presence of VOCs at concentrations below the cleanup standards in Site groundwater, likely caused by historical localized landfill gas migration or laboratory related contaminants. Iron and manganese were detected at concentrations above their respective cleanup standards in Site groundwater and surface water which is consistent with historical data. Both manganese and iron are naturally occurring metals common in groundwater in this area.

Based on available Site information and the 2020 analytical results, VOC and metals concentrations at the Site indicate minimal effect from the landfill on water quality.

6.0 REFERENCES

Applied Testing & Geosciences, LLC. (2014, January). *Ground Water Monitoring Report, 2013 Annual Report, Hunting Ridge Construction and Demolition Debris Landfill, Cambridge, Maryland* (Vol. Volume). (Editor, Ed.) City: Publisher.

Maryland Geological Survey. (2016, January). *Maryland Geology*. Retrieved from Maryland Geological Survey: http://www.mgs.md.gov/geology/index.html

Normandeau Associates, Inc. (2012). *Site-Specific Groundwater and Surface Water Monitoring Plan.*

United States Department of Agriculture. (2016, January). *Web Soil Survey*. Retrieved from Web Soil Survey: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

FIGURES

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SOURCE:

AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO, DATED MAY 2015.

N

0 5000 10000

SCALE IN FEET

TITLE: **SITE LOCATION MAP**

LOCATION: **Hunting Ridge C&D Landfill**
Hurlock, Maryland

TETRA TECH

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DATE	1-8-16	

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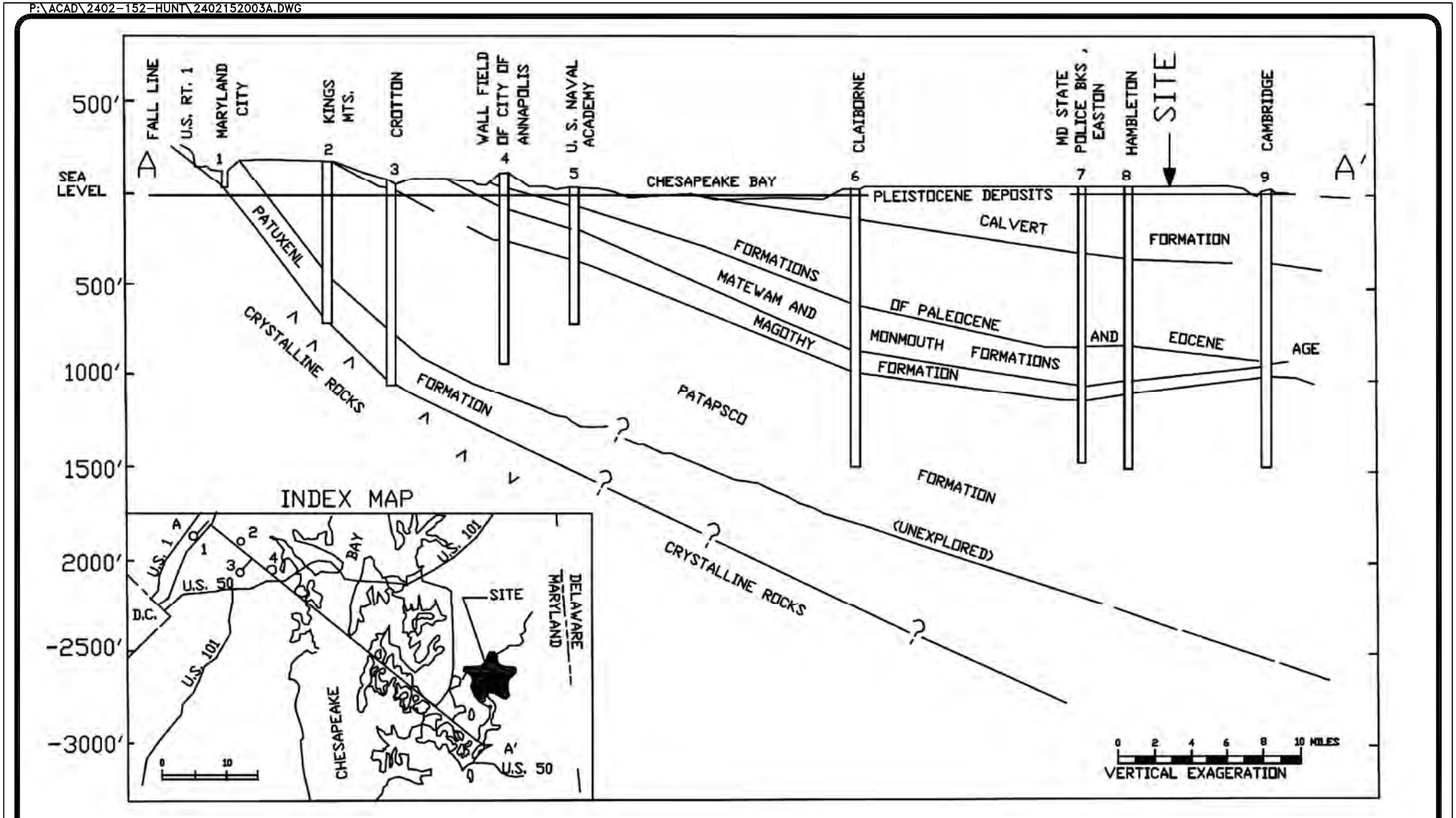

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LOCATION: **Hunting Ridge C&D Landfill**
Hurlock, Maryland

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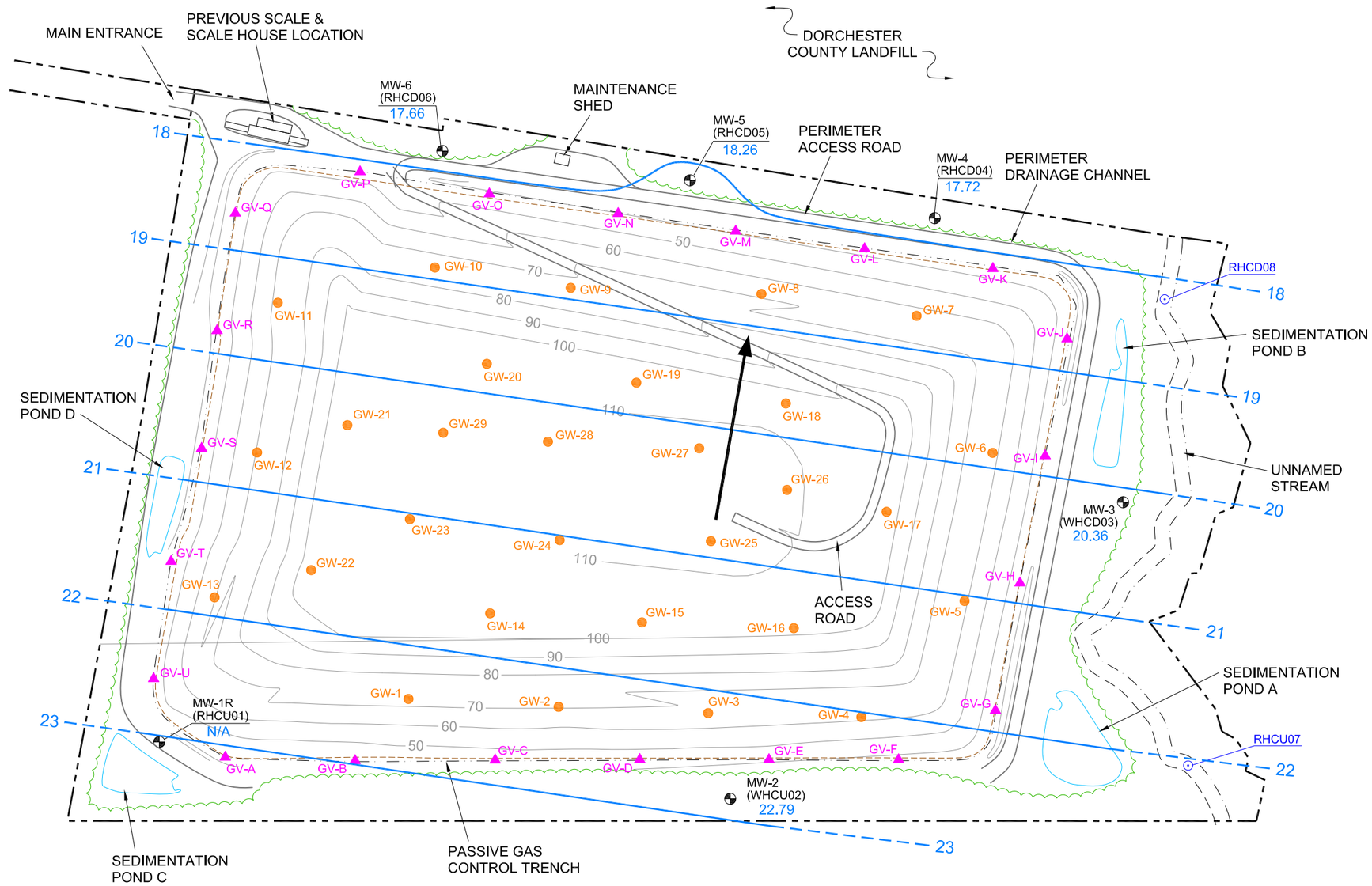

LEGEND

- PROPERTY LINE (SEE NOTE 3)
- LIMITS OF WASTE
- PERIMETER GAS CONTROL TRENCH
- 25' NONTIDAL WETLAND BUFFER
- NONTIDAL WETLAND LIMITS
- 80 — CLOSURE CAP INDEX CONTOUR
- TREELINE
- GROUNDWATER FLOW DIRECTION
- MW-4 (RHCD04) — GROUNDWATER MONITORING WELL
- GW-7 — GAS WELL
- GV-K — PERIMETER GAS VENT
- 17.72 — GROUNDWATER ELEVATION (MARCH 2020)
- RHCD08 — SURFACE WATER SAMPLING LOCATION

NOTES

1. VERTICAL CONTROL IS BASED ON U.S.G.S. MEAN SEA LEVEL.
2. HORIZONTAL COORDINATE GRID SYSTEM PRESENTED ON THIS DRAWING IS BASED ON THE MARYLAND STATE PLANE NAD 83 COORDINATE SYSTEM.
3. THE PROPERTY BOUNDARY SHOWN ON THIS PLAN IS TAKEN FROM A SURVEY BY WILLIAM W. LUDLOW JR. & ASSOCIATES DATED MAY 14, 1991.
4. THE TOPOGRAPHY SHOWN ON THIS PLAN IS BASED UPON AERIAL PHOTOGRAPHY BY AIR SURVEY CORPORATION, DATED NOVEMBER 12, 1996.
5. THE FINAL COVER GRADES ARE THE PROPOSED DESIGN GRADES.
6. SEE TABLE 1& 2 OF THE AS-BUILT DOCUMENTATION REPORT FOR THE COORDINATES OF GAS WELLS AND GAS VENTS.
7. THE AS-BUILT LOCATIONS OF GAS WELLS AND GAS VENTS SHOWN HERE ARE BASED ON THE AS-BUILT SURVEY PERFORMED BY FLORA SURVEYING ASSOCIATES, VA, DATED OCTOBER 20, 1997.

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0 200 400
SCALE IN FEET

TITLE: GAS WELL AND MONITORING WELL LOCATION MAP

LOCATION: Hunting Ridge C&D Landfill
Hurlock, Maryland

TETRA TECH

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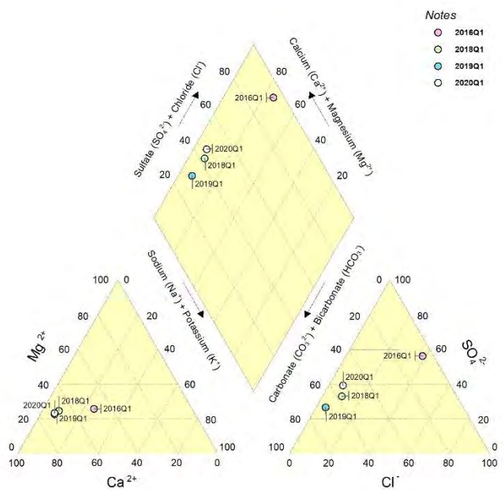
MW-1



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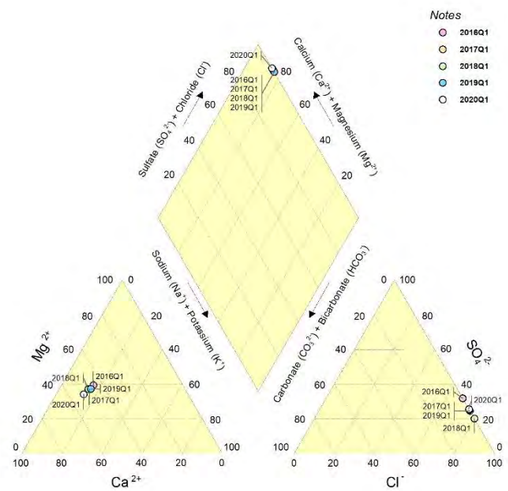

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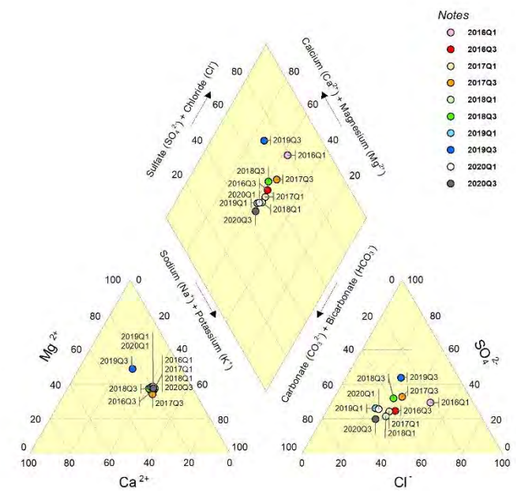
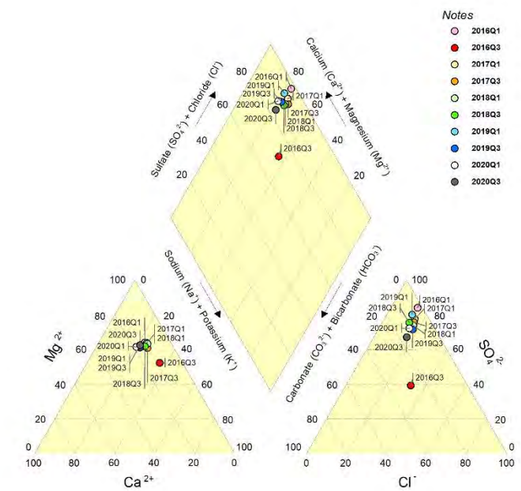


MW-4



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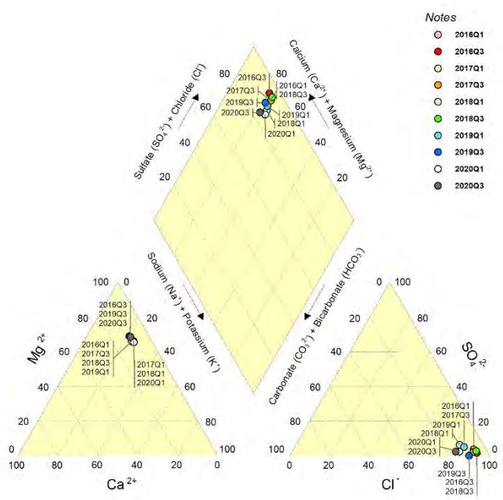
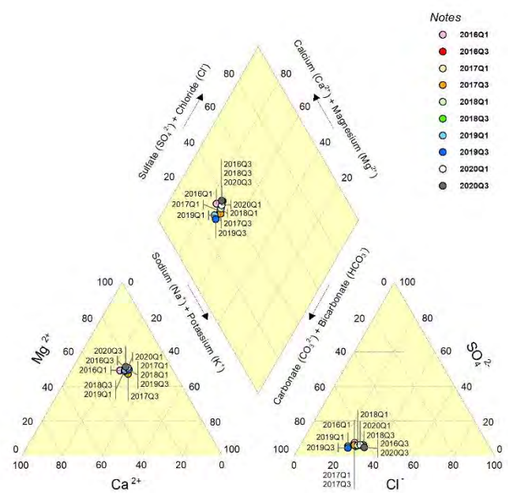
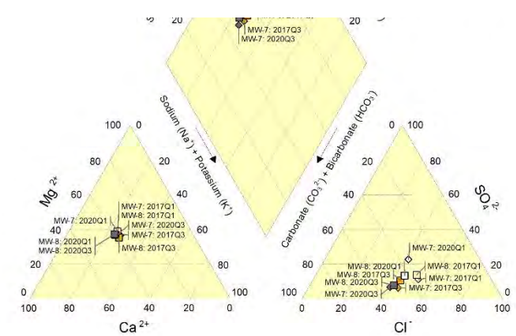


MW-6



MW-7 / MW-8



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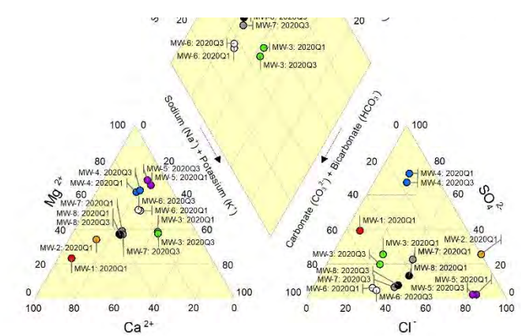

Note:
The 2020 samples were analyzed for total metals while samples collected prior to 2020 were analyzed for dissolved metals. As a result, the 2020Q1 and 2020Q3 dissolved cation proportion coordinates (Ca^{2+}, Mg^{2+}, and Na^{+} + K^{+}) on the above Piper diagrams may be considered approximate.

TITLE:	**PIPER DIAGRAMS**		
LOCATION:	**Waste Management, Inc., Hunting Ridge**		
TETRA TECH	APPROVED		FIGURE
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	PROJECT #	117-2402449	
	DATE	1/8/2021	

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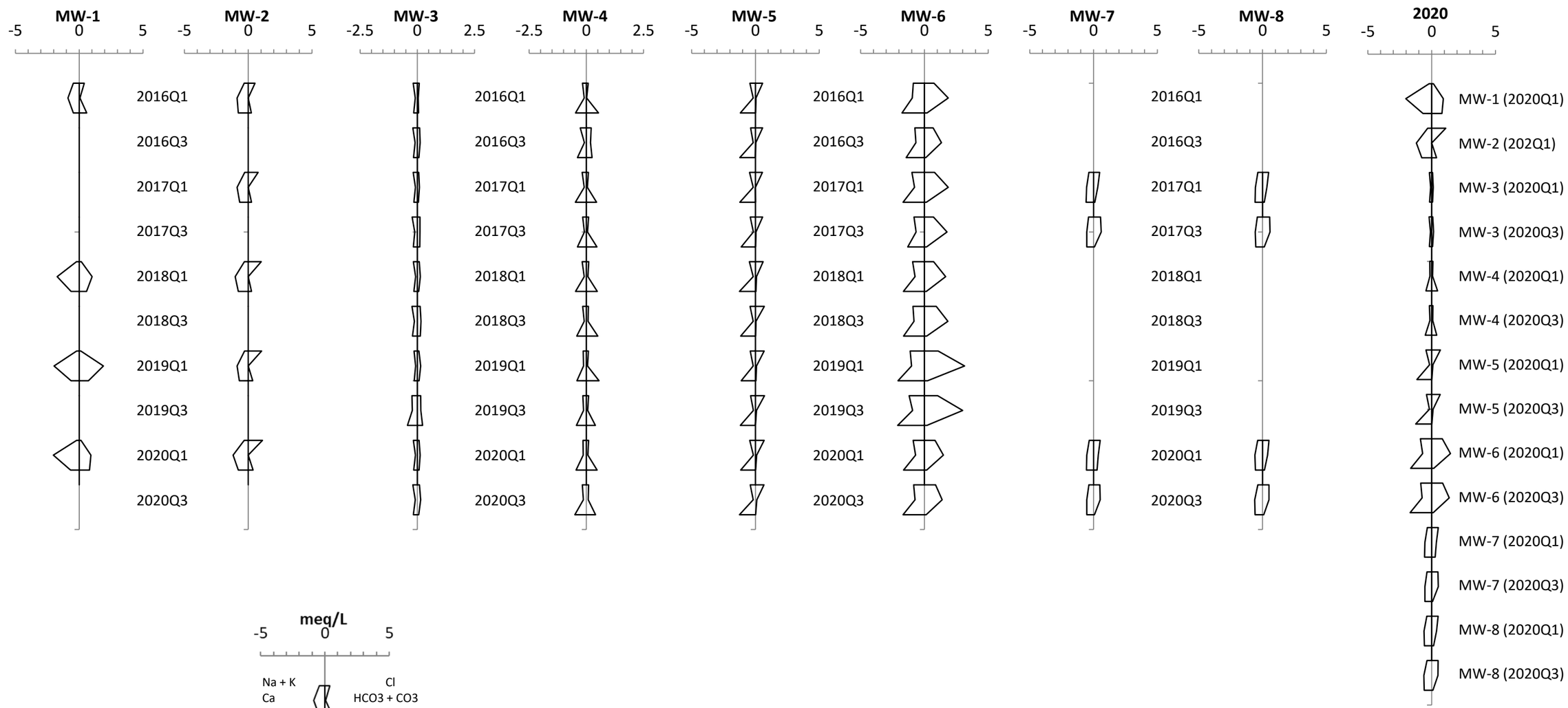

Note:
The 2020 samples were analyzed for total metals while samples collected prior to 2020 were analyzed for dissolved metals. As a result, the 2020Q1 and 2020Q3 dissolved cation normality vertices (Ca^{2+}, Mg^{2+}, and Na^{+} + K^{+}) on the above Stiff diagrams may be considered approximate.

TITLE:

STIFF DIAGRAMS

LOCATION:

Waste Management, Inc., Hunting Ridge

TETRA TECH

APPROVED		FIGURE
DRAFTED	JAR	5
PROJECT #	117-2402449	
DATE	01/8/2021	

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TABLES

TABLE 1
ENVIRONMENTAL MONITORING POINTS
HUNTING RIDGE CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL

Sample Location ID	Hydraulic Position	Screened Formation
Groundwater Monitoring Well		
MW-1R (RHCU01)	Up	Pensauken
MW-2 (WHCU02)	Up	Pensauken
MW-3 (WHCD03)	Down	Pensauken
MW-4 (RHCD04)	Down	Pensauken
MW-5 (RHCD05)	Down	Pensauken
MW-6 (RHCD06)	Down	Pensauken
Surface Water Monitoring Location		
RHCU07	Surface	Surface Water
RHCD08	Surface	Surface Water

TABLE 2
SEMI-ANNUAL GROUNDWATER ANALYTICAL PARAMETERS
HUNTING RIDGE CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL

Analyte	Laboratory RL	MDE PQL
Groundwater Quality		
Alkalinity, Total (as CaCO3) (mg/L)	1.0	1.0
Ammonia (as N) (mg/L)	1.0	1
Chemical Oxygen Demand (mg/L)	10.0	10
Chloride (mg/L)	0.39	0.39
Nitrogen, Nitrate (as N) (mg/L)	0.060	0.06
pH (Field) (S.U.)	0.100	0.1
pH (Lab Test) (S.U.)	0.100	0.1000
Specific Conductance (Field) (umhos/cm)	1.00	1
Specific Conductance (Lab) (umhos/cm)	1.00	1
Sulfate (mg/L)	0.38	0.38
Total Dissolved Solids (mg/L)	10.0	10
Total Hardness (mg/L)	0.525*	0.5
Turbidity (Field) (NTU)	0.10	0.11
Metals (mg/L)		
Arsenic, Total	0.0020	0.0020
Barium, Total	0.010	0.0100
Cadmium, Total	0.0040	0.0040
Calcium, Total	0.080	0.08
Chromium, Total	0.010	0.0100
Copper, Total	0.010	0.0100
Iron, Total	0.010*	0.005
Lead, Total	0.0020	0.0020
Magnesium, Total	0.005*	0.004
Manganese, Total	0.010	0.0100
Mercury, Total	0.00020	0.0002
Nickel, Total	0.011	0.0110
Potassium, Total	0.39	0.39
Sodium, Total	0.20	0.2
Zinc, Total	0.010	0.0100

Notes:
RL - Reporting Limit
PQL - Practical Quantitation Limit
MDE - Maryland Department of the Environment
mg/L - Miligrams per Liter
µg/L - Micrograms per Liter
umhos/cm - Mircomhos per Centimeter
NTU - Nephelometric Turbidity Units
S.U. - Standard Units
CaCO3 - calcium carbonate
as N - as nitrogen
* - TestAmericaLaboratory's lowest possible reporting limit

Analyte	Laboratory RL	MDE PQL
Volatile Organic Compounds (VOCs) (µg/L)		
1,1,1,2-Tetrachloroethane	1.0	1.0
1,1,1-Trichloroethane	1.0	1.0
1,1,2,2-Tetrachloroethane	1.0	1.0
1,1,2-Trichloroethane	1.0	1.0
1,1-Dichloroethane	1.0	1.0
1,1-Dichloroethene	1.0	1.0
1,2,3-Trichloropropane	1.0	1.0
1,2-Dibromo-3-Chloropropane	1.0	1.0
1,2-Dibromoethane	1.0	1.0
1,2-Dichlorobenzene	1.0	1.0
1,2-Dichloroethane	1.0	1.0
1,2-Dichloropropane	1.0	1.0
1,4-Dichlorobenzene	1.0	1.0
2-Butanone	5.0	5.0
2-Hexanone	5.0	5.0
4-Methyl-2-pentanone	5.0	5.0
Acetone	5.0	5.0
Acrylonitrile	5.0	5.0
Benzene	1.0	1.0
Bromochloromethane	1.0	1.0
Bromodichloromethane	1.0	1.0
Bromoform	1.0	1.0
Bromomethane	1.0	1.0
Carbon Disulfide	1.0	1.0
Carbon Tetrachloride	1.0	1.0
Chlorobenzene	1.0	1.0
Chloroethane	1.0	1.0
Chloroform	1.0	1.0
Chloromethane	1.0	1.0
cis-1,2-Dichloroethene	1.0	1.0
cis-1,3-Dichloropropene	1.0	1.0
Dibromochloromethane	1.0	1.0
Dibromomethane	1.0	1.0
Ethylbenzene	1.0	1.0
Iodomethane	1.0	1.0
Methyl Tert-Butyl ether	2.0	2.0
Methylene chloride	1.0	1.0
Styrene	1.0	1.0
Tetrachloroethene	1.0	1.0
Toluene	1.0	1.0
trans-1,2-Dichloroethene	1.0	1.0
trans-1,3-Dichloropropene	1.0	1.0
trans-1,4-Dichloro-2-butene	5.0	5.0
Trichloroethene	1.0	1.0
Trichlorofluoromethane	1.0	1.0
Vinyl acetate	1.0	1.0
Vinyl chloride	1.0	1.0
Xylene, Total	1.0	1.0

TABLE 3
SUMMARY OF ANALYTICAL DETECTIONS
MARCH 2020 SEMI-ANNUAL GROUNDWATER AND SURFACE WATER SAMPLING
Waste Management - Hunting Ridge Closed Construction and Demolition Debris Landfill

Analyte	Method	Units	Reporting Limit	MDE Cleanup Standard	Groundwater Monitoring Well Sampling							Surface Water Sampling		
					MW 1 (RHCU01)	MW 2 (WHCU02)	MW 3 (WHCD03)	MW 4 (RHCD04)	MW 5 (RHCD05)	MW 6 (RHCD06)	01FB	RHCU07	RHCD08	02FB
Field Sampling														
pH	Horiba U52	SU	N/A	N/A	6.00	4.63	4.84	4.61	5.00	6.32	NC	6.92	7.34	NC
Specific Conductance	Horiba U52	umhos/cm	N/A	N/A	249	234	41	79	184	294	NC	149	161	NC
Temperature	Horiba U52	°C	N/A	N/A	13.9	14.6	13.7	15.2	16.3	16.1	NC	10.8	10.7	NC
Turbidity	Horiba U52	NTU	N/A	N/A	367	356.0	11.3	504	0.0	19.3	NC	0.3	0.3	NC
General Chemistry														
Alkalinity, Total	SM 2320B	mg/L	1.0	N/A	68	ND	9.0 J	5.0 J	7.0 J	109	NC	27	29	NC
Ammonia as N	350.1	mg/L	1.0	N/A	ND	ND	ND	ND	0.19	0.27	NC	0.08 J	0.07 J	NC
Chemical Oxygen Demand	410.4	mg/L	10.0	N/A	8.0 J	ND	ND	ND	ND	5.0 J	NC	6 J	8 J	NC
Chloride	300.0	mg/L	0.39	N/A	5.1	39.4	2.7	3.5	24.3	29.4	NC	18.4	17.8	NC
Hardness, Total	SM 2340C	mg/L	2.6	N/A	135	98.4	11.8	29.4	65.8	117	NC	53.9	58.4	NC
Nitrogen, Nitrate	353.2	mg/L	0.060	N/A	10.5	13.7	1.47	2.04	15.8	4.16	NC	4.9	5.9	NC
pH	9040C	SU	0.0500	N/A	6.43 H	4.96 H	5.29 H	5 H	5.32 H	6.60 H	NC	7.07 H	7.04 H	NC
Specific Conductance	120.1	umhos/cm	1.00	N/A	300	282	56	98	220	347	NC	173	179	NC
Sulfate	300.0	mg/L	0.38	N/A	39	18.3	3.7	22.5	0.9 J	8.3	NC	13.5	7.1	NC
Total Dissolved Solids	SM 2540C	mg/L	10.0	N/A	192	182	52	68	124	170	NC	90	110	NC
Turbidity	180.1	NTU	0.100	N/A	60	250	3.8	35	0.2	30	NC	1.2	2.8	NC
Volatile Organic Compouinds (VOCs)														
Acetone	8260C	µg/L	5.0	N/A	ND	ND	ND	ND	ND	ND	NC	ND	ND	NC
Chloroform	8260C	µg/L	0.5	80	ND	ND	ND	0.5 J	ND	ND	NC	ND	ND	NC
Methylene Chloride	8260C	µg/L	2.0	5.0	ND	ND	ND	ND	0.6 J	ND	NC	ND	ND	NC
Methyl-tert-butyl ether	8260C	µg/L	2.0	20	ND	ND	ND	ND	0.6 J	ND	NC	ND	ND	NC
Metals														
Arsenic	6020A	mg/L	0.0020	0.01	ND	0.009 J	ND	ND	ND	0.003	NC	ND	ND	NC
Barium	6010C	mg/L	0.010	2.0	0.137	0.492	0.209	0.133	1.27	0.328	NC	0.345	0.337	NC
Cadmium	6020A	mg/L	0.0040	0.005	ND	ND	0.002 J	0.003	0.003	ND	NC	ND	ND	NC
Calcium	6010C	mg/L	0.080	N/A	40.7	23.8	1.57	2.72	3.27	14.1	NC	10.5	12	NC
Chromium	6010C	mg/L	0.010	0.1	ND	0.009 J	ND	ND	ND	ND	NC	ND	ND	NC
Copper	6010C	mg/L	0.010	1.3	ND	0.006 J	ND	ND	ND	ND	NC	ND	ND	NC
Iron	6010C	mg/L	0.022	1.4	0.72	**9.47**	0.14	**1.61**	0.06	**9.87**	NC	0.27	0.26	NC
Lead	6020A	mg/L	0.0020	0.015	0.004 J	0.0083	ND	0.005 J	0.003 J	0.003 J	NC	ND	ND	NC
Magnesium	6010C	mg/L	0.011	N/A	8.16	9.44	1.91	5.49	14	19.9	NC	6.73	6.88	NC
Manganese	6010C	mg/L	0.010	0.043	ND	**0.316**	**0.176**	**0.719**	**1.30**	**4.15**	NC	**0.231**	**0.280**	NC
Mercury	7470A	mg/L	0.00012	0.002	ND	ND	ND	ND	0.0004	ND	NC	ND	ND	NC
Nickel	6010C	mg/L	0.011	0.039	ND	ND	ND	ND	ND	ND	NC	ND	ND	NC
Potassium	6010C	mg/L	0.39	N/A	3.7	3.1	2.3	2.5	5.8	5.9	NC	4.7	4.7	NC
Sodium	6010C	mg/L	0.20	N/A	2.3	5.3	2.6	1.9	6.8	16.8	NC	5.1	5.9	NC
Zinc	6010C	mg/L	0.010	0.60	ND	0.011	0.013	0.014	0.008 J	ND	NC	ND	0.006 J	NC

Notes:

Samples collected on March 24, 2020.

All samples submitted to Geochemical Testing in Somerset, PA

MDE Cleanup Standard - Maryland Department of the Environment Cleanup Standards For Soil and Groundwater, October 2018

HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an apporximate value

NC - Field blank samples not collected due to the laboratory not providing sufficient bottles. Analsyses of trip blanks indicated all analytes were non-detect.

Bold - results exceeds MDE cleanup standard

ND - non-detect

B - Compound was found in the blank and sample

N/A - not applicable

H - Sample was prepped or analyzed beyond the specified holding time

F1 - MS and/or MSD Recovery is outside acceptance limits

µg/L - micrograms per liter

SU - standard unit

umhos/c - micromhos per centimeter

NTU - nephelometric turbidity unit

°C - degrees Celsius

mg/L - milligrams per liter

TABLE 4
SUMMARY OF ANALYTICAL DETECTIONS
SEPTEMBER 2020 SEMI-ANNUAL GROUNDWATER AND SURFACE WATER SAMPLING
Waste Management - Hunting Ridge Closed Construction and Demolition Debris Landfill

Analyte	Method	Units	Reporting Limit	MDE Cleanup Standard	Groundwater Monitoring Well Sampling							Surface Water Sampling		
					MW 1 (RHCU01)	MW 2 (WHCU02)	MW 3 (WHCD03)	MW 4 (RHCD04)	MW 5 (RHCD05)	MW-6 (RHCD06)	01FB	RHCU07	RHCD08	02FB
Field Sampling														
pH	Horiba U52	SU	N/A	N/A	N/A	N/A	4.56	3.92	4.59	6.21	NC	6.76	6.88	NC
Specific Conductance	Horiba U52	umhos/cm	N/A	N/A	N/A	N/A	41	73	158	253	NC	113	115	NC
Temperature	Horiba U52	°C	N/A	N/A	N/A	N/A	16.4	14.1	14.9	15.4	NC	23.3	23.1	NC
Turbidity	Horiba U52	NTU	N/A	N/A	N/A	N/A	ND	789	ND	7.6	NC	9.8	3.2	NC
General Chemistry														
Alkalinity, Total	SM 2320B	mg/L	1.0	N/A	N/A	N/A	11	6 J	8 J	102	ND	39	37	6 J
Ammonia as N	350.1	mg/L	1.0	N/A	N/A	N/A	ND	ND	0.32	0.26	0.05 J	0.13	0.13	0.05 J
Chemical Oxygen Demand	410.4	mg/L	10.0	N/A	N/A	N/A	ND	ND	ND	ND	ND	11	10	ND
Chloride	300.0	mg/L	0.39	N/A	N/A	N/A	3.2	3.5	24	30.7	ND	17.4	17.9	ND
Hardness, Total	SM 2340C	mg/L	2.6	N/A	N/A	N/A	13.2	31.7	71.1	121	ND	52.8	59.9	ND
Nitrogen, Nitrate	353.2	mg/L	0.060	N/A	N/A	N/A	1.52	2.99	13.5	4.02	ND	1.79	1.91	ND
pH	9040C	SU	0.0500	N/A	N/A	N/A	5.47	5.27	5.69	6.65	5.47	7.52	7.57	5.82
Specific Conductance	120.1	umhos/cm	1.00	N/A	N/A	N/A	56	93	222	322	3 J	164	166	6.0
Sulfate	300.0	mg/L	0.38	N/A	N/A	N/A	3.2	19.3	0.9 J	6.2	ND	3.8	4.5	ND
Total Dissolved Solids	SM 2540C	mg/L	10.0	N/A	N/A	N/A	52	68	116	180	ND	110	106	ND
Turbidity	180.1	NTU	0.100	N/A	N/A	N/A	1.0	32	0.4	4.2	0 J	1.4	1.8	0.1
Volatile Organic Compouinds (VOCs)														
Acetone	8260C	µg/L	5.0	ND	N/A	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	8260C	µg/L	0.5	80	N/A	N/A	ND	0.6 J	ND	ND	ND	ND	ND	ND
Methylene Chloride	8260C	µg/L	2.0	5.0	N/A	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl ether	8260C	µg/L	2.0	20	N/A	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Metals														
Arsenic	6020A	mg/L	0.0020	0.01	N/A	N/A	ND	ND	ND	0.008 J	ND	ND	ND	ND
Barium	6010C	mg/L	0.010	2.0	N/A	N/A	0.249	0.174	1.38	0.338	ND	0.361	0.435	ND
Cadmium	6020A	mg/L	0.0040	0.005	N/A	N/A	0.002 J	**0.005**	0.003	ND	ND	ND	0.003	ND
Calcium	6010C	mg/L	0.080	N/A	N/A	N/A	1.81	2.62	3.49	14.8	ND	10.6	12.3	0.09 J
Chromium	6010C	mg/L	0.010	0.1	N/A	N/A	ND	0.007 J	ND	ND	ND	ND	ND	ND
Copper	6010C	mg/L	0.010	1.3	N/A	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Iron	6010C	mg/L	0.022	1.4	N/A	N/A	0.04 J	**5.68**	ND	**9.22**	ND	0.55	**4.04**	ND
Lead	6020A	mg/L	0.0020	0.015	N/A	N/A	ND	0.0023	0.004 J	0.002 J	ND	ND	0.0026	ND
Magnesium	6010C	mg/L	0.011	N/A	N/A	N/A	2.1	6.12	15.2	20.4	ND	6.38	7.08	ND
Manganese	6010C	mg/L	0.010	0.043	N/A	N/A	**0.222**	**0.945**	**1.57**	**4.96**	ND	**0.43**	**0.926**	ND
Mercury	7470A	mg/L	0.00012	0.002	N/A	N/A	ND	ND	0.0001 J	ND	ND	ND	ND	ND
Nickel	6010C	mg/L	0.011	0.039	N/A	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	6010C	mg/L	0.39	N/A	N/A	N/A	2.6	3	5.6	5.6	ND	4.9	5	ND
Sodium	6010C	mg/L	0.20	N/A	N/A	N/A	3.0	2.2	6	16.3	0.1 J	5.4	5.5	0.2 J
Zinc	6010C	mg/L	0.010	0.60	N/A	N/A	0.013	0.018	0.007 J	ND	ND	ND	0.012	ND

Notes:

Samples collected on September 9, 2020.

All samples submitted to Geochemical Testing in Somerset, PA

MDE Cleanup Standard - Maryland Department of the Environment Cleanup Standards For Soil and Groundwater, October 2018

HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an apporximate value

Bold - results exceeds MDE cleanup standard

ND - non-detect

B - Compound was found in the blank and sample

N/A - not applicable

µg/L - micrograms per liter

SU - standard unit

umhos/c - micromhos per centimeter

NTU - nephelometric turbidity unit

°C - degrees Celsius

mg/L - milligrams per liter

APPENDIX A – QUARTERLY POST-CLOSURE SITE INSPECTION REPORTS

April 6, 2020

Mr. David Kaasa
District Manager, Environmental Legacy Management Group
Waste Management, Inc.
10376 Bullock Drive
King George, VA 22485

RE: Post-Closure Site Inspection Report – Q1 2020
Hunting Ridge C&D Debris Landfill
6801 East New Market-Ellwood Road
Hurlock, MD 21641

Dear Mr. Kaasa:

Attached is the first quarter 2020 post-closure site inspection that Tetra Tech, Inc. performed on March 24, 2020. Should you have any questions regarding this letter, please contact me at (410) 990-4607.

Sincerely,

Peter A. Rich, P.E.
Principal Engineer

Enclosure

TETRA TECH, INC.
980 Awald Road, Suite 302, Annapolis, MD 21403
Tel 410.990.4607 Fax 410.990.4749 www.tetratech.com

HUNTING RIDGE C&D LANDFILL
Hurlock, Maryland

POST-CLOSURE SITE INSPECTION
1st Quarter 2020

Date: 3/24/2020
Personnel: Andrew Smith, Tetra Tech
Weather: 50^0 Sunny

Landfill Type and Size: C&D; 44 acres (28 filled)
Landfill Close Date: 1/16/1998

POST-CLOSURE SITE INSPECTION					
	Yes	No	Minor Damage	Major Damage	Comments
Site Access and Security					
Is the site access road in good condition?	X				
Is the perimeter fencing in good condition?	X				
Are perimeter warning signs present?	X				
Is the landfill mound access road in good condition?	X				
Is there evidence of damage due to unauthorized access?		X			
Cap and Vegetation					
Is the vegetative layer in good condition?	X				
Are all side slopes in good condition?	X				
Is there evidence of erosion?		X			
Are there depressions in the cap's surface?		X			
Is there evidence of damage due to burrowing animals?		X			
Is there evidence of gas or leachate break-outs?		X			
Drainage					
Are appropriate runoff controls in place?	X				
Is there blockage to the slope drains?		X			
Is there blockage to the perimeter drainage swales?		X			
Are all sedimentation ponds in good condition?	X				
Are all outlet structures intact and free of obstructions?	X				
Monitoring Wells					
Are all groundwater monitoring wells accessable?	X				
Are all groundwater monitoring wells secure?	X				
Are all groundwater monitoring wells in good condition?	X				
Gas System					
Are all gas probes accessable?	X				
All all gas probes secure?	X				
Are all gas probes in good condition?	X				
Are all gas vent flares in good condition?	X				
Were any landfill odors detected at the property line?		X			

June 18, 2020

Mr. David Kaasa
District Manager, Environmental Legacy Management Group
Waste Management, Inc.
10376 Bullock Drive
King George, VA 22485

RE: Post-Closure Site Inspection Report – Q2 2020
Hunting Ridge C&D Debris Landfill
6801 East New Market-Ellwood Road
Hurlock, MD 21641

Dear Mr. Kaasa:

Attached is the second quarter 2020 post-closure site inspection that Tetra Tech, Inc. performed on June 11, 2020. Should you have any questions regarding this letter, please contact me at (410) 990-4607.

Sincerely,

Peter A. Rich, P.E.
Principal Engineer

Enclosure

TETRA TECH, INC.
980 Awald Road, Suite 302, Annapolis, MD 21403
Tel 410.990.4607 Fax 410.990.4749 www.tetratech.com

HUNTING RIDGE C&D LANDFILL
Hurlock, Maryland

POST-CLOSURE SITE INSPECTION
2nd Quarter 2020

Date: 6/11/2020
Personnel: AJS
Weather: 75°F; cloudy and windy

Landfill Type and Size: C&D; 44 acres (28 filled)
Landfill Close Date: 1/16/1998

POST-CLOSURE SITE INSPECTION					
	Yes	No	Minor Damage	Major Damage	Comments
Site Access and Security					
Is the site access road in good condition?	X				
Is the perimeter fencing in good condition?	X				
Are perimeter warning signs present?	X				
Is the landfill mound access road in good condition?	X				
Is there evidence of damage due to unauthorized access?		X			
Is the vegetative layer in good condition?	X				
Are all side slopes in good condition?	X				
Is there evidence of erosion?		X			
Are there depressions in the cap's surface?		X			
Is there evidence of damage due to burrowing animals?		X			
Is there evidence of gas or leachate break-outs?		X			
Drainage					
Are appropriate runoff controls in place?	X				
Is there blockage to the slope drains?		X			
Is there blockage to the perimeter drainage swales?		X			
Are all sedimentation ponds in good condition?	X				
Are all outlet structures intact and free of obstructions?	X				
Monitoring Wells					
Are all groundwater monitoring wells accessable?	X				
Are all groundwater monitoring wells secure?	X				
Are all groundwater monitoring wells in good condition?	X				
Are all gas probes accessable?	X				
All all gas probes secure?	X				
Are all gas probes in good condition?	X				
Are all gas vent flares in good condition?		X			GW-11 has broken and fallen over. Temporarily capped until a permanent cap can be obtained.
Were any landfill odors detected at the property line?		X			

September 30, 2020

Mr. David Kaasa
District Manager, Environmental Legacy Management Group
Waste Management, Inc.
10376 Bullock Drive
King George, VA 22485

RE: Post-Closure Site Inspection Report – Q3 2020
Hunting Ridge C&D Debris Landfill
6801 East New Market-Ellwood Road
Hurlock, MD 21641

Dear Mr. Kaasa:

Attached is the third quarter 2020 post-closure site inspection that Tetra Tech, Inc. performed on September 9 2020. Should you have any questions regarding this letter, please contact me at (410) 990-4607.

Sincerely,

Peter A. Rich, P.E.
Principal Engineer

Enclosure

TETRA TECH, INC.
980 Awald Road, Suite 302, Annapolis, MD 21403
Tel 410.990.4607 Fax 410.990.4749 www.tetratech.com

HUNTING RIDGE C&D LANDFILL
Hurlock, Maryland

POST-CLOSURE SITE INSPECTION
3rd Quarter 2020

Date: 9/9/2020
Personnel: Andrew Smith & Jeff Campbell, Tetra Tech
Weather: 80° Rain

Landfill Type and Size: C&D; 44 acres (28 filled)
Landfill Close Date: 1/16/1998

POST-CLOSURE SITE INSPECTION					
	Yes	No	Minor Damage	Major Damage	Comments
Site Access and Security					
Is the site access road in good condition?	X				Overgrown
Is the perimeter fencing in good condition?	X				
Are perimeter warning signs present?	X				
Is the landfill mound access road in good condition?	X				Overgrown
Is there evidence of damage due to unauthorized access?		X			
Cap and Vegetation					
Is the vegetative layer in good condition?	X				
Are all side slopes in good condition?	X				
Is there evidence of erosion?		X			
Are there depressions in the cap's surface?		X			
Is there evidence of damage due to burrowing animals?		X			
Is there evidence of gas or leachate break-outs?		X			
Drainage					
Are appropriate runoff controls in place?	X				
Is there blockage to the slope drains?		X			
Is there blockage to the perimeter drainage swales?		X			
Are all sedimentation ponds in good condition?	X				
Are all outlet structures intact and free of obstructions?	X				
Monitoring Wells					
Are all groundwater monitoring wells accessable?	X				
Are all groundwater monitoring wells secure?	X				
Are all groundwater monitoring wells in good condition?	X				
Gas System					
Are all gas probes accessable?	X				
All all gas probes secure?	X				
Are all gas probes in good condition?	X				
Are all gas vent flares in good condition?	X				
Were any landfill odors detected at the property line?		X			

January 6, 2021

Mr. David Kaasa
District Manager, Environmental Legacy Management Group
Waste Management, Inc.
10376 Bullock Drive
King George, VA 22485

RE: Post-Closure Site Inspection Report – Q4 2020
Hunting Ridge C&D Debris Landfill
6801 East New Market-Ellwood Road
Hurlock, MD 21641

Dear Mr. Kaasa:

Attached is the fourth quarter 2020 post-closure site inspection that Tetra Tech, Inc. performed on December 10, 2020. Should you have any questions regarding this letter, please contact me at (410) 990-4607.

Sincerely,

Peter A. Rich, P.E.
Principal Engineer

Enclosure

TETRA TECH, INC.
980 Awald Road, Suite 302, Annapolis, MD 21403
Tel 410.990.4607 Fax 410.990.4749 www.tetratech.com

HUNTING RIDGE C&D LANDFILL
Hurlock, Maryland

POST-CLOSURE SITE INSPECTION
4th Quarter 2020

Date: 12/10/2020
Personnel: Andrew Smith
Weather: 40° - 50°, Sunny

Landfill Type and Size: C&D; 44 acres (28 filled)
Landfill Close Date: 1/16/1998

POST-CLOSURE SITE INSPECTION					
	Yes	No	Minor Damage	Major Damage	Comments
Site Access and Security					
Is the site access road in good condition?	X				
Is the perimeter fencing in good condition?	X				
Are perimeter warning signs present?	X				
Is the landfill mound access road in good condition?	X				
Is there evidence of damage due to unauthorized access?		X			
Cap and Vegetation					
Is the vegetative layer in good condition?	X				
Are all side slopes in good condition?	X				
Is there evidence of erosion?		X			
Are there depressions in the cap's surface?		X			
Is there evidence of damage due to burrowing animals?		X			
Is there evidence of gas or leachate break-outs?		X			
Drainage					
Are appropriate runoff controls in place?	X				
Is there blockage to the slope drains?		X			
Is there blockage to the perimeter drainage swales?		X			
Are all sedimentation ponds in good condition?	X				
Are all outlet structures intact and free of obstructions?	X				
Monitoring Wells					
Are all groundwater monitoring wells accessable?	X				
Are all groundwater monitoring wells secure?	X				
Are all groundwater monitoring wells in good condition?	X				
Gas System					
Are all gas probes accessable?	X				
All all gas probes secure?	X				
Are all gas probes in good condition?	X				
Are all gas vent flares in good condition?	X				
Were any landfill odors detected at the property line?		X			

APPENDIX B – GROUNDWATER SAMPLING FIELD FORMS

TETRA TECH

FIELD EQUIPMENT CALIBRATION LOG

Date: 3/24/20
Personnel: AS
Equipment: Horiba
Model No.:

Parameter	Pre-Calibration Reading	Post-Calibration Reading	Comments
			Horiba was calibrated at
			9:00am
			Exact parameter readings
			were not recorded

Date: 3/24/20
Personnel: AS
Equipment: ~~[illegible]~~ GEM Meter
Model No.:

Parameter	Pre-Calibration Reading	Post-Calibration Reading	Comments
			GEM Meter was calibrated
			at 9:00am
			Exact parameter readings
			were not recorded

Date:
Personnel:
Equipment:
Model No.:

Parameter	Pre-Calibration Reading	Post-Calibration Reading	Comments

TETRA TECH

FIELD EQUIPMENT CALIBRATION LOG

Date: 9/9/20
Personnel: AS + JC
Equipment: Horiba
Model No.: U-50FC

Parameter	Pre-Calibration Reading	Post-Calibration Reading	Comments
Temp	21.37	21.37	
pH	3.97	4.00	
ORP	401	408	
MS/CM	5.36	4.58	
NTU	1.9	0.0	
mg/L DO	11.15	9.79	
ppt	2.89	2.40	

Date: 9/9/20
Personnel: AS + JC
Equipment: GEM 5000
Model No.: 44965

Parameter	Pre-Calibration Reading	Post-Calibration Reading	Comments
CH_4	0.0	0.0	
CO_2	0.0	0.0	
O_2	21.1	21.0	
Balf	78.8	78.8	

Date:
Personnel:
Equipment:
Model No.:

Parameter	Pre-Calibration Reading	Post-Calibration Reading	Comments

TETRA TECH

GW LEVELS

Waste Management - Hunting Ridge Closed C&D Landfill

Date: 3/24/20
Personnel: AS
Weather: 56'k Sunny

Well ID	Time	Well Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Comments
RHCU01	15:45	–	23.44	–	
WHCU02	15:15	43.12	20.33	23.56	
WHCD03	14:48	30.45	10.09	20.44	
RHCD04	14:22	36.04	18.32	19.63	
RHCD05	13:55	39.09	30.33	–	
RHCD06	12:40	–	22.27	–	

TETRA TECH

GW LEVELS

Waste Management - Hunting Ridge Closed C&D Landfill

Date: 9/9/20
Personnel: AS + JC
Weather: Rain / overcast 80°

Well ID	Time	Well Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Comments
RHCU01	13:59	—	23.30	—	
WHCU02	14:08	43.12	20.48	22.64	
WHCD03	9:25	30.45	10.09	20.36	
RHCD04	10:07	36.04	18.84	17.20	
RHCD05	10:40	39.09	21.42	17.67	
RHCD06	11:16	—	22.53	—	

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: RHCU01 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler this is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1544	11	15	80	50

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment .. Dedicated: Y or (N) Filter Device: Y or (N) 0.45 µ or _____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other: _____

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other: _____

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: _____

WELL DATA

Well Elevation (at TOC): ___ (ft/msl) Depth to Water (DTW) (from TOC): 2344 (ft) Groundwater Elevation (site datum, from TOC): ___ (ft/msl)

Total Well Depth (from TOC): 3250 (ft) Stick Up (from ground elevation): 300 (ft) Casing ID: 2 (in) Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1546	4	582	1.247	139	114	118	2840	
1548	1	594	1.248	138	8660	113	2750	
1549	2	601	1.248	138	7110	109	2720	
1551	3	603	1.249	139	3620	107	2770	
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units: _____
32420	600	1.249	139	3670	107	2820	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: Odorless Color: Colorless Other: _____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50% Sunny Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

32.50 - 23.44 = 9.06 • 0.163 = 1.48 • 3 = **4.43**

Sampled @ 15:55

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: WHCU02 (Sample ID)

Exit Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED
32420	1514	16	12	100	80

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment Dedicated: Y or (N)

Filter Device: Y or (N) 0.45μ or ____ μ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other: _____

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other: _____

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: _____

WELL DATA

Well Elevation (at TOC): 4312 (ft/msl) — Depth to Water (DTW) (from TOC): 2033 (ft) — Groundwater Elevation (site datum, from TOC): 2356 (ft/msl)

Total Well Depth (from TOC): 2739 (ft) — Stick Up (from ground elevation): 300 (ft) — Casing ID: 2 (in) — Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be correct.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1515	4 1st	4.67 1st	.329	143	10000	107	3310	
1517	1 2nd	4.62 2nd	.236	145	27510	103	3520	
1520	2 3rd	4.66 3rd	.236	143	6310	100	3420	
1522	3 4th	4.65 4th	.233	145	2900	99	3620	
Suggested range for 3 consec. readings or new Permit/State requirements:		+/- 0.2	+/- 3%	-	-	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic Forms is used, fill in final readings below and submit electronic data separately as Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units: _____
32420	463	.234	146	3560	99	3670	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

FIELD COMMENTS

Sample Appearance: Cloudy — Odor: odorless — Color: tan/murky — Other: _____

Weather Conditions (required daily, or as conditions change): — Direction/Speed: NW/8 — Outlook: 50's sunny — Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

20.39 − 20.33 = 7.06 · 0.163 = 1.15 × 3 = 3.45

Sampled @ 15:30

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3.24.20	Andrew Smith	[signature]	Tetra tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

Site Name: Hunting Ridge L.F.
Site No.: 0898 Sample Point: WHCD03 (Sample ID)

This Waste Management Field Information Form is Required. This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (Decimal)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
3/24/20	1445	1.4	1.6	1.00	3.0

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w. Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark unused, record field data, below.

PURGE/SAMPLE EQUIPMENT

Pumping and Sampling Equipment ... Dedicated: Y or (N)
Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)
Pumping Device: A — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle
Sampling Device: A
X-Other:
Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other
Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other

WELL DATA

Well Elevation (at TOC): 3045 (feet)
Depth to Water (DTW) (from TOC): 10.09 (ft)
Groundwater Elevation (site datum, from TOC): 2044 (feet)
Total Well Depth (from TOC): 20.10 (ft)
Stick Up (from ground elevation): 3.00 (ft)
Casing ID: 2 (in)
Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing ID, etc. are optional and can be from historical data, unless required by Site Permit. Well Elevation, DTW and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1448	2 1	4.85	1.058	13.2	270.0	1.14	326	
1450	1 2	4.82	1.037	13.2	117.7	1.11	333	
1452	2 3	4.81	1.038	13.4	31.8	1.08	329	
1454	3 4	4.81	1.039	13.5	21.1	1.06	335	
Suggested range for 3 consec. readings or non Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If extra fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
3/24/20	4.84	1.041	13.7	11.3	1.03	343	

Final Field Readings are required. (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

FIELD COMMENTS

Sample Appearance: Clear Odor: Odorless Color: Colorless Other:
Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50s Sunny Precipitation: Y or (N)
Specific Comments (including purge/well volume calculation if required):

20.10 − 10.09 = 10.01 · 0.163 = 1.63 · 3 = 4.89

Sampled @ 14:59

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrea Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: R4CD04 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler they is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 H/ Clock)	ELAPSED HRS (hrs/min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1420	10	19	100	50

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Attach changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle as fill in)

Purging Device: A — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other

WELL DATA

Well Elevation (at TOC): 3604 (ft/msl) — Depth to Water (DTW) (from TOC): 1832 (ft) — Groundwater Elevation (site datum, from TOC): 1963 (ft/msl)

Total Well Depth (from TOC): 3000 (ft) — Stick Up (from ground elevation): 300 (ft) — Casing ID: 2 (in) — Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	dH/ORP (mV)	DTW (ft)
1422	T	4.79	.083	146	2280	114	321	
1426	1	4.64	.080	150	1910	105	341	
1428	2	4.63	.080	151	904	101	335	
1430	3	4.63	.081	149	3830	101	344	
Suggested range for 3 consec. readings to note Permit/State requirements		+/- 0.1	+/- 3%	-	-	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by Site/Permit Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	dH/ORP (mV)	Other: Units
32420	461	.079	152	5040	98	3600	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by Site/Permit Site.

FIELD COMMENTS

Sample Appearance: Cloudy — Odor: odorless — Color: colorless — Other:

Weather Conditions (required daily, or as conditions change): — Direction/Speed: NW/8 — Outlook: 50's sunny — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

30.00 − 18.32 = 11.68 · 0.163 = 1.90 · 3 = 5.71

Sampled @ 14:30

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge L.F.

Site No.: 898 Sample Point: RHCD05 (Sample ID)

This Waste Management Field Information Form is Required. This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs.min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1355	09	25	100	40

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment Dedicated: Y or (N)

Purging Device: A — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Device: Y or (N) 0.45 µ or ___ µ (circle or fill in)

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other

WELL DATA

Well Elevation (at TOC): 3909 (ft/msl) Depth to Water (DTW) (from TOC): 2083 (ft) Groundwater Elevation (site datum, from TOC): ___ (ft/msl)

Total Well Depth (from TOC): 3600 (ft) Stick Up (from ground elevation): 300 (ft) Casing ID: 2 (in) Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1355	4 1st	560 1st	.131	151	520	127	1780	
1358	1 2nd	533 2nd	.170	160	27	105	2080	
1400	2 3rd	517 3rd	.180	162	00	101	2420	
1402	3 4th	510 4th	.183	162	00	99	2510	
Suggested range for 3 consec. Readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
32420	500	.184	163	00	98	2780	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

FIELD COMMENTS

Sample Appearance: Clear Odor: Odorless Color: colorless Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50s sunny Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

36.00 − 20.83 = 15.17 · 0.163 = 2.47 · 3 = 7.42

Sampled @ 1404

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3.24.20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge ~~RHC D06~~ L F

Site No.: 898 Sample Point: RHCD06 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs.min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1238	25	108	330	30

Note: For Passive Sampling, replace "Water Vol In Casing" and "Well Vols Purged" w/ Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Make changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Purging Device: A — A - Submersible Pump, B - Peristaltic Pump, C - QED Bladder Pump, D - Bailer, E - Piston Pump, F - Dipper/Bottle

Sampling Device: A

X-Other: _____

Filter Device: Y or N — 0.45 µ = _____ µ (circle or fill in)

Filter Type: N/A — A - In-line Disposable, B - Pressure, C - Vacuum, X - Other _____

Sample Tube Type: D — A - Teflon, B - Stainless Steel, C - PVC, D - Polypropylene, X - Other _____

WELL DATA

Well Elevation (at TOC): _____ (ft/msl)

Depth to Water (DTW) (from TOC): 22.27 (ft)

Groundwater Elevation (site datum, from TOC): _____ (ft/msl)

Total Well Depth (from TOC): 38.83 (ft)

Stick Up (from ground elevation): 19 (ft)

Casing ID: 4 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1240	T 1st	675 1st	.263	140	117	111	290	226
1247	1 2nd	630 2nd	.296	157	150	96	140	226
1254	2 3rd	637 3rd	.305	159	236	95	120	226
1300	3 4th	643 4th	.298	160	229	95	80	226
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	-	-	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, State, or State). These fields can be used where four (4) field measurements are required by State/Permit Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units: _____
32420	632	.294	161	193	97	200	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit Site.

FIELD COMMENTS

Sample Appearance: Clear Odor: Odorless Color: Colorless Other: _____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50s sunny Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

(38.83 - 22.27) · 0.653 = 10.81 x 3 = 32.44 gal

Sampled @ 13:03

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample. YELLOW - Returned to Client. PINK - Field Copy

FIELD INFORMATION FORM

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: RHCU07 (Sample ID)

This Waste Management Field Information Form is Required. This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Form that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hr:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
3					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing, Flow Cell and Tubing, Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment Dedicated: Y or N — Filter Dedicated: Y or N — 0.45 u or ____ u (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

X-Other: ____

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other: ____

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC): ____ (ft/msl) — Depth to Water (DTW) (from TOC): ____ (ft) — Groundwater Elevation (elev-depth, from TOC): ____ (ft/msl)

Total Well Depth (from TOC): ____ (ft) — Stick Up (from ground elevation): ____ (ft) — Casing ID: ____ (in) — Casing Material: ____

Note: Total Well Depth, Stick Up, Casing id, etc. are optional and can be from historical data, unless required by Site Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for stabilization readings (if any Permit/Site requirements):		+/- 0.2	+/- 3%	-	-	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Table are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used when final (4) field measurements are required by Site/Permit/Reg. If a Data Logger or other Electronic Sensor is used, fill in final readings below and submit electronic data separately in Sec. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units: ____
3/24/20	6.92	.149	10.8	0.3	11.2	153.0	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sampler readings before sampling for all field parameters required by Site/Permit/Reg.

Sample Appearance: Clear — Odor: odorless — Color: Colorless — Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 — Outlook: 80s Sunny — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required): ____

FIELD COMMENTS

Surface sample taken @ 12:15

I certify the sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3.24.20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge LF

Site No.: 3898

Sample Point: R4CD08 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL. IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLS PURGED
3 24 20					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: ____ A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Filter Type: ____ A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sampling Device: ____

X-Other: ____

Sample Tube Type: ____ A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st							
	2nd							
	3rd							
	4th							
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	—	—	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
3 24 20	7.34	0.161	18.7	0.3	12.6	79.0	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

Sample Appearance: Clear Odor: Odorless Color: Colorless Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50s Sunny Precipitation: Y or (N)

FIELD COMMENTS

Specific Comments (including purge/well volume calculations if required):

Surface sample taken @ 11:50

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3,24,20	Andrew Smith	[signature]	Tetra Tech
/ /			

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD06 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
09 09 20	1116	124	1045	320	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Purging Device: A — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): (ft/msl)

Depth to Water (DTW) (from TOC): 22.53 (ft)

Groundwater Elevation (site datum, from TOC): (ft/msl)

Total Well Depth (from TOC): 38.53 (ft)

Stick Up (from ground elevation): 1.90 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1119	1	5.91	0.213	15.5	0.80	0.0	190.0	22.7
1124	2	5.80	0.236	15.5	1.02	0.0	54.0	22.7
1130	3	6.13	0.250	15.4	9.3	0.0	14.0	22.7
1137	4	6.20	0.255	15.4	9.8	0.0	5.0	22.7
Suggested range for 3 consec. readings or note Permit/State requirements		+/- 0.2	+/- 3%	-	-	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
09 09 20	6.21	0.253	15.4	7.6	0.0	60	22.77

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: odorless Color: colorless Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 Outlook: 55° overcast Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

38.53 − 22.53 = 16.00 · 0.653 = 10.45 · 3 = 31.35

Sampled @ 11:48

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WM

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD05 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
090920	1040	12	24	80	33

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ___ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): 3909 (ft/msl)

Depth to Water (DTW) (from TOC): 2142 (ft)

Groundwater Elevation (site datum, from TOC): ___ (ft/msl)

Total Well Depth (from TOC): 3600 (ft)

Stick Up (from ground elevation): 300 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
10:44	2	1st 499	1st .142	150	42	2.10	4630	216
10:46	1	2nd 483	2nd .154	149	11	3.35	4880	216
10:48	2	3rd 493	3rd .157	149	00	4.32	4850	216
10:50	3	4th 472	4th .158	149	00	4.50	4770	216
:								
:								
:								
:								
:								
:								
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
090920	459	0.158	149	30	46	479	21.64

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear — Odor: Odorless — Color: Colorless — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE / 10 — Outlook: 80° Rain — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

36.00 − 21.42 = 14.58 · 0.163 = 2.38 · 3 = 7.14

sampled @ 10:52

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
09/09/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD04 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
090920	1007	13	18	60	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other: _____

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other _____

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other _____

WELL DATA

Well Elevation (at TOC): 3604 (ft/msl)

Depth to Water (DTW) (from TOC): 1884 (ft)

Groundwater Elevation (site datum, from TOC): 1963 (ft/msl)

Total Well Depth (from TOC): 3000 (ft)

Stick Up (from ground elevation): 300 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
10:11	W 1st	4.47 1st	.074	14.3	3830	2.5	389.0	22.73
10:14	1 2nd	4.18 2nd	.076	14.3	2020	2.1	415.0	22.75
10:16	2 3rd	4.33 3rd	.077	14.1	5570	1.7	446.0	23.33
10:18	3 4th	3.95 4th	.073	14.1	10000	2.2	463.0	24.17
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____
090920	3.92	.073	14.1	7890	2.1	468.0	24.38

Final Field Readings are required *(i.e. record field measurement, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Cloudy muddy — Odor: odorless — Color: tan — Other: _____

Weather Conditions (required daily, or as conditions change): — Direction/Speed: NE/10 — Outlook: 80° overcast — Precipitation: (Y) or N

Specific Comments (including purge/well volume calculations if required):

30.00 − 18.84 = 11.16 · 0.163 = 1.82 · 3 = 5.46

Sampled @ 10:20

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
09/09/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample. YELLOW - Returned to Client. PINK - Field Copy.

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: WHCD03 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
09 09 20	925	113	16	50	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or _____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other: _____

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other _____

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: _____

WELL DATA

Well Elevation (at TOC): 3045 (ft/msl)

Depth to Water (DTW) (from TOC): 1038 (ft)

Groundwater Elevation (site datum, from TOC): 2007 (ft/msl)

Total Well Depth (from TOC): 2010 (ft)

Stick Up (from ground elevation): 3.0 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
9:28	1st	4.97	.893	19.7	28.2	11.9	365.0	10.4
9:31	2nd	4.79	.044	17.1	16.9	11.6	365.0	12.1
9:33	3rd	4.73	.041	15.7	10.6	11.7	337.0	12.3
9:35	4th	4.57	.041	16.5	0.0	10.5	384.6	12.5
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units
09 09 20	4.56	.041	16.4	0.0	10.3	388.0	12.5

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: odorless Color: colorless Other: _____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 Outlook: 80s Rain Precipitation: (Y) or N

Specific Comments (including purge/well volume calculations if required):

20.10 - 10.38 = 9.72 · 0.163 = 1.58 · 3 = 4.75

sampled @ 9:38

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	A. J. Smith	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD08 (Sample ID)

This Waste Management Field Information Form is Required. This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hr:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED

Note: For Passive/Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: ____

X-Other: ____

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 1%	-	-	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet of form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
090920	688	.115	23.1	32	99	1830	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Clear Odor: Colorless Color: Colorless Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 Outlook: 30° Overcast Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required): ____

FIELD COMMENTS

Surface Sample taken @ 12:48

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

FIELD INFORMATION FORM

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCU07 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (minutes)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ___ µ (circle or fill in)

Purging Device: A - Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for Tolerance readings or note Permit/State requirements:		+/- 0.2	+/- 3%	—	—	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
09 09 20	6.76	61.3	23.3	9.8	9.2	186.0	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: odorless Color: colorless Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 Outlook: 80° overcast Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

Surface sample taken @ 12:31

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	Andrew S. Smith	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

APPENDIX C – LABORATORY REPORTS

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset, PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

Tuesday, April 7, 2020

David Kaasa
WM OF MARYLAND INC. / HRLF
100 BRANDYWIND BLVD
THIRD FLOOR
NEWTOWN, PA 18940

RE: Hunting Ridge LF 221SA Order No.: G2003D16

Dear David Kaasa:

Geochemical Testing received 5 sample(s) on 3/25/2020 for the analyses presented in the following report.

There were no problems with sample receipt protocols and analyses met the TNI/NELAC, EPA, and laboratory specifications except where noted in the Case Narrative or Laboratory Results.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Timothy W. Bergstresser
Director of Technical Services

Nate R. Bergstresser
Client Support

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306PA DEP

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 221SA
Lab Order: G2003D16

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

Legend:

H - Method Hold Time exceeded and is not compliant with 40CFR136 Table II.
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.
B - Analyte detected in the associated Method Blank
Q1 - See case narrative ND - Not Detected
MCL - Contaminant Limit J - Indicates an estimated value.
Q - Qualifier QL -Quantitation Limit DF - Dilution Factor

S - Surrogate Recovery outside accepted recovery limits
T - Sample received above required temperature and is not compliant with 40CFR136 Table II.
T1 - Sample received above required temperature
MDA - Minimum Detectable Activity.
** - Value exceeds Action Limit
TICs - Tentatively Identified Compounds.
E - Value above quantitation range

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD06
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 1:03:00 PM
Lab ID:	G2003D16-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	6.32		0		S.U.			03/24/20 1:03 PM
Specific Conductance (Field)	294		0		µmhos/cm			03/24/20 1:03 PM
Temperature (Field)	16.1		0		deg C			03/24/20 1:03 PM
Turbidity (Field)	19.3		0		NTU			03/24/20 1:03 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	347		2.0	5	µmhos/cm	1		03/26/20 7:44 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	6.60	H	0		S.U.	1		03/26/20 7:44 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	170		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	109		5.0	10	mg/L CaCO3	1		03/26/20 7:44 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5	J	5.0	10	mg/L	1	03/26/20 8:29 AM	03/26/20 11:15 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	29.4		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 7:51 PM
Sulfate	8.3		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 7:51 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.27		0.040	0.10	mg/L as N	1		03/25/20 7:44 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	4.16		0.100	0.25	mg/L as N	5	03/25/20 11:11 AM	03/26/20 6:43 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	30.0		0.05	0.1	NTU	1	03/25/20 12:00 PM	03/25/20 12:24 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:22 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.328		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Calcium	14.1		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD06
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 1:03:00 PM
Lab ID:	G2003D16-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	9.87		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Magnesium	19.9		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Manganese	4.15		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Potassium	5.9		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Sodium	16.8		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Zinc	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
Hardness (SM 2340B)	117		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:11 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	3.0		0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 8:57 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 8:57 AM
Lead	0.3	J	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 8:57 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 3:04 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 3:04 PM
Surr: 1,1,2,2-Tetrachloroethane	75.5		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 3:04 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 1:17 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 1:17 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 1:17 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 1:17 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD06
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 1:03:00 PM
Lab ID:	G2003D16-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 1:17 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 1:17 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:17 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 1:17 PM
Surr: 1,2-Dichloroethane-d4	106		0	70-130	%REC	1		03/25/20 1:17 PM
Surr: 4-Bromofluorobenzene	98.5		0	70-130	%REC	1		03/25/20 1:17 PM
Surr: Dibromofluoromethane	96.0		0	70-130	%REC	1		03/25/20 1:17 PM
Surr: Toluene-d8	100		0	70-130	%REC	1		03/25/20 1:17 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD05
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:04:00 PM
Lab ID:	G2003D16-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	5.00		0		S.U.			03/24/20 2:04 PM
Specific Conductance (Field)	184		0		µmhos/cm			03/24/20 2:04 PM
Temperature (Field)	16.3		0		deg C			03/24/20 2:04 PM
Turbidity (Field)	0.0		0		NTU			03/24/20 2:04 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	220		2.0	5	µmhos/cm	1		03/26/20 7:50 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	5.32	H	0		S.U.	1		03/26/20 7:50 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	124		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	7	J	5.0	10	mg/L CaCO3	1		03/26/20 7:50 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	03/26/20 8:29 AM	03/26/20 11:15 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	24.3		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 8:27 PM
Sulfate	0.9	J	0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 8:27 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.19		0.040	0.10	mg/L as N	1		03/25/20 7:46 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	15.8		0.200	0.50	mg/L as N	10	03/26/20 8:09 AM	03/26/20 6:44 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	0.2		0.05	0.1	NTU	1	03/25/20 12:00 PM	03/25/20 12:24 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.0004		0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:16 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	1.27		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Calcium	3.27		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD05
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:04:00 PM
Lab ID:	G2003D16-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.06		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Magnesium	14.0		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Manganese	1.30		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Potassium	5.8		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Sodium	6.8		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Zinc	0.008	J	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
Hardness (SM 2340B)	65.8		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:23 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:06 AM
Cadmium	0.3		0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:06 AM
Lead	0.3	J	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:06 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 3:22 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 3:22 PM
Surr: 1,1,2,2-Tetrachloroethane	68.0		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 3:22 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 1:43 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 1:43 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 1:43 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 1:43 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM

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Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD05
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:04:00 PM
Lab ID:	G2003D16-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 1:43 PM
Methylene Chloride	0.6	J	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Methyl-tert-butyl ether	0.6	J	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 1:43 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 1:43 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 1:43 PM
Surr: 1,2-Dichloroethane-d4	108		0	70-130	%REC	1		03/25/20 1:43 PM
Surr: 4-Bromofluorobenzene	96.8		0	70-130	%REC	1		03/25/20 1:43 PM
Surr: Dibromofluoromethane	97.1		0	70-130	%REC	1		03/25/20 1:43 PM
Surr: Toluene-d8	100		0	70-130	%REC	1		03/25/20 1:43 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD04
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:30:00 PM
Lab ID:	G2003D16-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	4.61		0		S.U.			03/24/20 2:30 PM
Specific Conductance (Field)	079		0		µmhos/cm			03/24/20 2:30 PM
Temperature (Field)	15.2		0		deg C			03/24/20 2:30 PM
Turbidity (Field)	504.0		0		NTU			03/24/20 2:30 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	98		2.0	5	µmhos/cm	1		03/26/20 7:54 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	5.00	H	0		S.U.	1		03/26/20 7:54 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	68		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	5	J	5.0	10	mg/L CaCO3	1		03/26/20 7:54 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	03/26/20 8:29 AM	03/26/20 11:15 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	3.5		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 8:39 PM
Sulfate	22.5		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 8:39 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.040	U	0.040	0.10	mg/L as N	1		03/25/20 7:48 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	2.04		0.040	0.10	mg/L as N	2	03/26/20 8:09 AM	03/26/20 6:45 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	35.0		0.05	0.1	NTU	1	03/25/20 12:00 PM	03/25/20 12:24 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:41 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.133		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Calcium	2.72		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD04
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:30:00 PM
Lab ID:	G2003D16-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	1.61		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Magnesium	5.49		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Manganese	0.719		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Potassium	2.5		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Sodium	1.9		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/27/20 10:03 AM
Zinc	0.014		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
Hardness (SM 2340B)	29.4		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:24 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:09 AM
Cadmium	0.3		0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:09 AM
Lead	0.5	J	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:09 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 4:16 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 4:16 PM
Surr: 1,1,2,2-Tetrachloroethane	74.1		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 4:16 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 2:09 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 2:09 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 2:09 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 2:09 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD04
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:30:00 PM
Lab ID:	G2003D16-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Chloroform	0.5	J	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 2:09 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 2:09 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:09 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 2:09 PM
Surr: 1,2-Dichloroethane-d4	105		0	70-130	%REC	1		03/25/20 2:09 PM
Surr: 4-Bromofluorobenzene	97.7		0	70-130	%REC	1		03/25/20 2:09 PM
Surr: Dibromofluoromethane	95.1		0	70-130	%REC	1		03/25/20 2:09 PM
Surr: Toluene-d8	101		0	70-130	%REC	1		03/25/20 2:09 PM

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCD03
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:59:00 PM
Lab ID:	G2003D16-004	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	4.84		0		S.U.			03/24/20 2:59 PM
Specific Conductance (Field)	041		0		µmhos/cm			03/24/20 2:59 PM
Temperature (Field)	13.7		0		deg C			03/24/20 2:59 PM
Turbidity (Field)	11.3		0		NTU			03/24/20 2:59 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	56		2.0	5	µmhos/cm	1		03/26/20 7:57 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	5.29	H	0		S.U.	1		03/26/20 7:57 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	52		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	9	J	5.0	10	mg/L CaCO3	1		03/26/20 7:57 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	03/26/20 8:29 AM	03/26/20 11:15 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	2.7		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 8:51 PM
Sulfate	3.7		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 8:51 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.040	U	0.040	0.10	mg/L as N	1		03/25/20 7:56 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	1.47		0.020	0.05	mg/L as N	1	03/26/20 8:09 AM	03/26/20 6:19 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	3.8		0.05	0.1	NTU	1	03/25/20 12:00 PM	03/25/20 12:24 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:23 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.209		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Calcium	1.57		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCD03
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:59:00 PM
Lab ID:	G2003D16-004	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.14		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Magnesium	1.91		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Manganese	0.176		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Potassium	2.3		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Sodium	2.6		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/27/20 10:07 AM
Zinc	0.013		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
Hardness (SM 2340B)	11.8		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:26 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:11 AM
Cadmium	0.2	J	0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:11 AM
Lead	0.20	U	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:11 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 4:34 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 4:34 PM
Surr: 1,1,2,2-Tetrachloroethane	68.5		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 4:34 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 2:35 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 2:35 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 2:35 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 2:35 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCD03
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 2:59:00 PM
Lab ID:	G2003D16-004	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 2:35 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 2:35 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 2:35 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 2:35 PM
Surr: 1,2-Dichloroethane-d4	107		0	70-130	%REC	1		03/25/20 2:35 PM
Surr: 4-Bromofluorobenzene	97.8		0	70-130	%REC	1		03/25/20 2:35 PM
Surr: Dibromofluoromethane	97.8		0	70-130	%REC	1		03/25/20 2:35 PM
Surr: Toluene-d8	101		0	70-130	%REC	1		03/25/20 2:35 PM

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	Trip Blank
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/25/2020 10:33:00 AM
Lab ID:	G2003D16-005	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 4:52 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 4:52 PM
Surr: 1,1,2,2-Tetrachloroethane	69.5		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 4:52 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,2-Dibromo-3-chloropropane	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:01 PM
1,2-Dibromoethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:01 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:01 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 3:01 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 3:01 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:01 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM

ACCREDITED IN ACCORDANCE WITH nelac

I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	Trip Blank
Lab Order:	G2003D16		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/25/2020 10:33:00 AM
Lab ID:	G2003D16-005	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	3/25/2020 10:34:08 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 3:01 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:01 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 3:01 PM
Surr: 1,2-Dichloroethane-d4	107		0	70-130	%REC	1		03/25/20 3:01 PM
Surr: 4-Bromofluorobenzene	98.2		0	70-130	%REC	1		03/25/20 3:01 PM
Surr: Dibromofluoromethane	96.1		0	70-130	%REC	1		03/25/20 3:01 PM
Surr: Toluene-d8	99.7		0	70-130	%REC	1		03/25/20 3:01 PM

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I.D. 56-00306 PA DEP

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset, PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

Tuesday, April 7, 2020

David Kaasa
WM OF MARYLAND INC. / HRLF
100 BRANDYWIND BLVD
THIRD FLOOR
NEWTOWN, PA 18940

RE: Hunting Ridge LF 221SA Order No.: G2003D21

Dear David Kaasa:

Geochemical Testing received 2 sample(s) on 3/25/2020 for the analyses presented in the following report.

There were no problems with sample receipt protocols and analyses met the TNI/NELAC, EPA, and laboratory specifications except where noted in the Case Narrative or Laboratory Results.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Timothy W. Bergstresser
Director of Technical Services

Nate R. Bergstresser
Client Support

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306PA DEP

Geochemical Testing

Date: *07-Apr-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 221SA
Lab Order: G2003D21

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

Legend:

H - Method Hold Time exceeded and is not compliant with 40CFR136 Table II.
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.
B - Analyte detected in the associated Method Blank
Q1 - See case narrative ND - Not Detected
MCL - Contaminant Limit J - Indicates an estimated value.
Q - Qualifier QL -Quantitation Limit DF - Dilution Factor

S - Surrogate Recovery outside accepted recovery limits
T - Sample received above required temperature and is not compliant with 40CFR136 Table II.
T1 - Sample received above required temperature
MDA - Minimum Detectable Activity.
** - Value exceeds Action Limit
TICs - Tentatively Identified Compounds.
E - Value above quantitation range

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCU01
Lab Order:	G2003D21		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 3:55:00 PM
Lab ID:	G2003D21-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:48:29 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	6.00		0		S.U.			03/24/20 3:55 PM
Specific Conductance (Field)	249		0		µmhos/cm			03/24/20 3:55 PM
Temperature (Field)	13.9		0		deg C			03/24/20 3:55 PM
Turbidity (Field)	367.0		0		NTU			03/24/20 3:55 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	300		2.0	5	µmhos/cm	1		03/26/20 8:00 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	6.43	H	0		S.U.	1		03/26/20 8:00 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	192		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	68		5.0	10	mg/L CaCO3	1		03/26/20 8:00 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	8	J	5.0	10	mg/L	1	03/29/20 9:04 AM	03/29/20 11:40 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	5.1		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:15 PM
Sulfate	39.0		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:15 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.040	U	0.040	0.10	mg/L as N	1		03/25/20 8:00 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	10.5		0.200	0.50	mg/L as N	10	03/26/20 8:09 AM	03/26/20 6:46 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	60.0		0.10	0.2	NTU	2	03/25/20 12:00 PM	03/25/20 12:24 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:25 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.137		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Calcium	40.7		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM

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Laboratory Results

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Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCU01
Lab Order:	G2003D21		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 3:55:00 PM
Lab ID:	G2003D21-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:48:29 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.72		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Magnesium	8.16		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Manganese	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Potassium	3.7		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Sodium	2.3		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/27/20 10:11 AM
Zinc	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
Hardness (SM 2340B)	135		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:34 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:13 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:13 AM
Lead	0.4	J	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:13 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 5:10 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 5:10 PM
Surr: 1,1,2,2-Tetrachloroethane	73.0		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 5:10 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:28 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:28 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 3:28 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 3:28 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM

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Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCU01
Lab Order:	G2003D21		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 3:55:00 PM
Lab ID:	G2003D21-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:48:29 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:28 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 3:28 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:28 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 3:28 PM
Surr: 1,2-Dichloroethane-d4	108		0	70-130	%REC	1		03/25/20 3:28 PM
Surr: 4-Bromofluorobenzene	97.9		0	70-130	%REC	1		03/25/20 3:28 PM
Surr: Dibromofluoromethane	95.8		0	70-130	%REC	1		03/25/20 3:28 PM
Surr: Toluene-d8	100		0	70-130	%REC	1		03/25/20 3:28 PM

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Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCU02
Lab Order:	G2003D21		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 3:30:00 PM
Lab ID:	G2003D21-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:48:29 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	4.63		0		S.U.			03/24/20 3:30 PM
Specific Conductance (Field)	234		0		µmhos/cm			03/24/20 3:30 PM
Temperature (Field)	14.6		0		deg C			03/24/20 3:30 PM
Turbidity (Field)	356.0		0		NTU			03/24/20 3:30 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	282		2.0	5	µmhos/cm	1		03/26/20 8:06 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	4.96	H	0		S.U.	1		03/26/20 8:06 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	182		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	5.0	U	5.0	10	mg/L CaCO3	1		03/26/20 8:06 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	03/29/20 9:04 AM	03/29/20 11:40 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	39.4		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:27 PM
Sulfate	18.3		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:27 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.040	U	0.040	0.10	mg/L as N	1		03/25/20 8:02 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	13.7		0.200	0.50	mg/L as N	10	03/26/20 8:09 AM	03/26/20 6:47 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	250		0.50	1.0	NTU	10	03/25/20 12:00 PM	03/25/20 12:24 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:27 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.492		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Calcium	23.8		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Chromium	0.009	J	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Copper	0.006	J	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM

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Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCU02
Lab Order:	G2003D21		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 3:30:00 PM
Lab ID:	G2003D21-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:48:29 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	9.47		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Magnesium	9.44		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Manganese	0.316		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Potassium	3.1		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Sodium	5.3		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/27/20 10:15 AM
Zinc	0.011		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
Hardness (SM 2340B)	98.4		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:39 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.9	J	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:34 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:34 AM
Lead	8.3		0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/27/20 11:22 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 5:28 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 5:28 PM
Surr: 1,1,2,2-Tetrachloroethane	73.9		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 5:28 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:54 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:54 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 3:54 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 3:54 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM

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Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCU02
Lab Order:	G2003D21		
Project:	Hunting Ridge LF 221SA	**Collection Date:**	3/24/2020 3:30:00 PM
Lab ID:	G2003D21-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 10:48:29 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 3:54 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 3:54 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 3:54 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 3:54 PM
Surr: 1,2-Dichloroethane-d4	107		0	70-130	%REC	1		03/25/20 3:54 PM
Surr: 4-Bromofluorobenzene	96.6		0	70-130	%REC	1		03/25/20 3:54 PM
Surr: Dibromofluoromethane	96.0		0	70-130	%REC	1		03/25/20 3:54 PM
Surr: Toluene-d8	101		0	70-130	%REC	1		03/25/20 3:54 PM

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I.D. 56-00306 PA DEP

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset, PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

Tuesday, April 7, 2020

David Kaasa
WM OF MARYLAND INC. / HRLF
100 BRANDYWIND BLVD
THIRD FLOOR
NEWTOWN, PA 18940

RE: Hunting Ridge LF 721SA Order No.: G2003D24

Dear David Kaasa:

Geochemical Testing received 3 sample(s) on 3/25/2020 for the analyses presented in the following report.

There were no problems with sample receipt protocols and analyses met the TNI/NELAC, EPA, and laboratory specifications except where noted in the Case Narrative or Laboratory Results.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Timothy W. Bergstresser
Director of Technical Services

Nate R. Bergstresser
Client Support

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I.D. 56-00306PA DEP

Geochemical Testing

Date: *07-Apr-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 721SA
Lab Order: G2003D24

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

Legend:

H - Method Hold Time exceeded and is not compliant with 40CFR136 Table II.
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.
B - Analyte detected in the associated Method Blank
Q1 - See case narrative ND - Not Detected
MCL - Contaminant Limit J - Indicates an estimated value.
Q - Qualifier QL -Quantitation Limit DF - Dilution Factor

S - Surrogate Recovery outside accepted recovery limits
T - Sample received above required temperature and is not compliant with 40CFR136 Table II.
T1 - Sample received above required temperature
MDA - Minimum Detectable Activity.
** - Value exceeds Action Limit
TICs - Tentatively Identified Compounds.
E - Value above quantitation range

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD08
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/24/2020 11:50:00 AM
Lab ID:	G2003D24-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	7.34		0		S.U.			03/24/20 11:50 AM
Specific Conductance (Field)	161		0		µmhos/cm			03/24/20 11:50 AM
Temperature (Field)	10.7		0		deg C			03/24/20 11:50 AM
Turbidity (Field)	0.3		0		NTU			03/24/20 11:50 AM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	179		2.0	5	µmhos/cm	1		03/26/20 8:41 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	7.04	H	0		S.U.	1		03/26/20 8:41 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	110		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	29		5.0	10	mg/L CaCO3	1		03/26/20 8:41 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	8	J	5.0	10	mg/L	1	03/29/20 9:04 AM	03/29/20 11:40 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	17.8		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:39 PM
Sulfate	7.1		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:39 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.07	J	0.040	0.10	mg/L as N	1		03/25/20 8:06 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	5.90		0.100	0.25	mg/L as N	5	03/26/20 8:09 AM	03/26/20 6:48 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	2.8		0.05	0.1	NTU	1	03/25/20 2:35 PM	03/25/20 2:43 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:29 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.337		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Calcium	12.0		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD08
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/24/2020 11:50:00 AM
Lab ID:	G2003D24-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.26		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Magnesium	6.88		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Manganese	0.280		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Potassium	4.7		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Sodium	5.9		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Zinc	0.006	J	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
Hardness (SM 2340B)	58.4		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:41 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:36 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:36 AM
Lead	0.20	U	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:36 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 5:46 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 5:46 PM
Surr: 1,1,2,2-Tetrachloroethane	67.6		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 5:46 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 5:13 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 5:13 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 5:13 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 5:13 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD08
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/24/2020 11:50:00 AM
Lab ID:	G2003D24-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 5:13 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 5:13 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:13 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 5:13 PM
Surr: 1,2-Dichloroethane-d4	108		0	70-130	%REC	1		03/25/20 5:13 PM
Surr: 4-Bromofluorobenzene	97.2		0	70-130	%REC	1		03/25/20 5:13 PM
Surr: Dibromofluoromethane	96.6		0	70-130	%REC	1		03/25/20 5:13 PM
Surr: Toluene-d8	101		0	70-130	%REC	1		03/25/20 5:13 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD07
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/24/2020 12:15:00 PM
Lab ID:	G2003D24-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	6.92		0		S.U.			03/24/20 12:15 PM
Specific Conductance (Field)	149		0		µmhos/cm			03/24/20 12:15 PM
Temperature (Field)	10.8		0		deg C			03/24/20 12:15 PM
Turbidity (Field)	0.3		0		NTU			03/24/20 12:15 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	173		2.0	5	µmhos/cm	1		03/26/20 8:45 AM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	7.07	H	0		S.U.	1		03/26/20 8:45 AM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	90		10	20	mg/L	1	03/25/20 1:00 PM	03/25/20 1:14 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	27		5.0	10	mg/L CaCO3	1		03/26/20 8:45 AM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	6	J	5.0	10	mg/L	1	03/29/20 9:04 AM	03/29/20 11:40 AM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	18.4		0.20	1.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:51 PM
Sulfate	13.5		0.50	2.0	mg/L	1	03/25/20 7:35 PM	03/25/20 9:51 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.08	J	0.040	0.10	mg/L as N	1		03/25/20 8:08 PM
INORGANIC NON-METALS			Analyst:	**MHF**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	4.90		0.100	0.25	mg/L as N	5	03/26/20 8:09 AM	03/26/20 6:28 PM
INORGANIC NON-METALS			Analyst:	**MAG**			**EPA 180.1**	**EPA 180.1**
Turbidity	1.2		0.05	0.1	NTU	1	03/25/20 2:35 PM	03/25/20 2:43 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	03/25/20 4:45 PM	03/26/20 7:34 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.345		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Calcium	10.5		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD07
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/24/2020 12:15:00 PM
Lab ID:	G2003D24-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.27		0.020	0.05	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Magnesium	6.73		0.050	0.10	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Manganese	0.231		0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Potassium	4.7		0.20	0.5	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Sodium	5.1		0.10	0.2	mg/L	1	03/25/20 3:55 PM	03/27/20 10:18 AM
Zinc	0.0050	U	0.0050	0.010	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
Hardness (SM 2340B)	53.9		0.50	1.0	mg/L	1	03/25/20 3:55 PM	03/26/20 8:43 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:39 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	03/25/20 3:55 PM	03/26/20 9:39 AM
Lead	0.20	U	0.20	1.0	µg/L	1	03/25/20 3:55 PM	03/26/20 9:39 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 6:04 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 6:04 PM
Surr: 1,1,2,2-Tetrachloroethane	67.1		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 6:04 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 5:39 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 5:39 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 5:39 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 5:39 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD07
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/24/2020 12:15:00 PM
Lab ID:	G2003D24-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 5:39 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 5:39 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 5:39 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 5:39 PM
Surr: 1,2-Dichloroethane-d4	109		0	70-130	%REC	1		03/25/20 5:39 PM
Surr: 4-Bromofluorobenzene	97.6		0	70-130	%REC	1		03/25/20 5:39 PM
Surr: Dibromofluoromethane	97.0		0	70-130	%REC	1		03/25/20 5:39 PM
Surr: Toluene-d8	101		0	70-130	%REC	1		03/25/20 5:39 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	Trip Blank
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/25/2020 10:47:00 AM
Lab ID:	G2003D24-003	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **TEW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 6:23 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	03/25/20 7:06 PM	03/31/20 6:23 PM
Surr: 1,1,2,2-Tetrachloroethane	81.4		0	60-140	%REC	1	03/25/20 7:06 PM	03/31/20 6:23 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,2-Dibromo-3-chloropropane	1.00	U	1.00	5.0	µg/L	1		03/25/20 6:06 PM
1,2-Dibromoethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 6:06 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		03/25/20 6:06 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Acetone	5.00	U	5.00	10	µg/L	1		03/25/20 6:06 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		03/25/20 6:06 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		03/25/20 6:06 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *07-Apr-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	Trip Blank
Lab Order:	G2003D24		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	3/25/2020 10:47:00 AM
Lab ID:	G2003D24-003	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	3/25/2020 11:01:37 AM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		03/25/20 6:06 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		03/25/20 6:06 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		03/25/20 6:06 PM
Surr: 1,2-Dichloroethane-d4	108		0	70-130	%REC	1		03/25/20 6:06 PM
Surr: 4-Bromofluorobenzene	96.7		0	70-130	%REC	1		03/25/20 6:06 PM
Surr: Dibromofluoromethane	95.3		0	70-130	%REC	1		03/25/20 6:06 PM
Surr: Toluene-d8	101		0	70-130	%REC	1		03/25/20 6:06 PM

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I.D. 56-00306 PA DEP

Geochemical Testing

Quality Assurance Project Report
Prepared for
WM OF MARYLAND INC. / HRLF

4/7/2020

Signed: _____
Leslie Ann Nemeth
Project Manager

Signed: _____
David M. Glessner
Quality Assurance Coordinator

Geochemical Testing

Date: *07-Apr-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 221SA
Lab Order: G2003D16

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
G2003D16-001A	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-001B	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-001C	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-001D	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-001E	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-001F	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-001G	RHCD06		3/24/2020 1:03:00 PM	3/25/2020
G2003D16-002A	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-002B	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-002C	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-002D	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-002E	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-002F	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-002G	RHCD05		3/24/2020 2:04:00 PM	3/25/2020
G2003D16-003A	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-003B	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-003C	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-003D	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-003E	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-003F	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-003G	RHCD04		3/24/2020 2:30:00 PM	3/25/2020
G2003D16-004A	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-004B	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-004C	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-004D	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-004E	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-004F	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-004G	WHCD03		3/24/2020 2:59:00 PM	3/25/2020
G2003D16-005A	Trip Blank		3/25/2020 10:33:00 AM	3/25/2020
G2003D16-005B	Trip Blank		3/25/2020 10:33:00 AM	3/25/2020
G2003D16-005C	Trip Blank		3/25/2020 10:33:00 AM	3/25/2020

Geochemical Testing

Date: *07-Apr-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 221SA
Lab Order: G2003D21

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
G2003D21-001A	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-001B	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-001C	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-001D	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-001E	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-001F	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-001G	RHCU01		3/24/2020 3:55:00 PM	3/25/2020
G2003D21-002A	WHCU02		3/24/2020 3:30:00 PM	3/25/2020
G2003D21-002B	WHCU02		3/24/2020 3:30:00 PM	3/25/2020
G2003D21-002C	WHCU02		3/24/2020 3:30:00 PM	3/25/2020
G2003D21-002D	WHCU02		3/24/2020 3:30:00 PM	3/25/2020
G2003D21-002E	WHCU02		3/24/2020 3:30:00 PM	3/25/2020
G2003D21-002F	WHCU02		3/24/2020 3:30:00 PM	3/25/2020
G2003D21-002G	WHCU02		3/24/2020 3:30:00 PM	3/25/2020

Geochemical Testing

Date: *07-Apr-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 721SA
Lab Order: G2003D24

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
G2003D24-001A	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-001B	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-001C	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-001D	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-001E	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-001F	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-001G	RHCD08		3/24/2020 11:50:00 AM	3/25/2020
G2003D24-002A	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-002B	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-002C	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-002D	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-002E	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-002F	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-002G	RHCD07		3/24/2020 12:15:00 PM	3/25/2020
G2003D24-003A	Trip Blank		3/25/2020 10:47:00 AM	3/25/2020
G2003D24-003B	Trip Blank		3/25/2020 10:47:00 AM	3/25/2020
G2003D24-003C	Trip Blank		3/25/2020 10:47:00 AM	3/25/2020

Qualifier Exception Code

1) Spike recovery limits are not applicable when the sample concentration exceeds the spike concentration by a factor of four or greater.

2) Batch data is acceptable when the matrix spike exceeds control limits but the corresponding LCS is within control limits.

3) Laboratory duplicate. If one or both of the values is less than 5 times the PQL, the allowed difference is +/- the PQL.

4) The TNI standard allows for a specific number of LCS parameters to be within four standard deviations, also known as a Marginal Exceedance. The recovery for this analyte is outside the standard limits but within the allowed marginal exceedance.

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: COD_HACH 8000

Sample ID: **LCS 50-176339** SampType: **LCS1** TestCode: **COD_HACH 8** Units: **mg/L** Prep Date: **3/26/2020** RunNo: **230429**
Client ID: Batch ID: **176339** TestNo: **HACH 8000** Analysis Date: **3/26/2020** SeqNo: **5800420**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	48.81	10	50	0	97.6	90	110				

Sample ID: **G2003D16-004BMS** SampType: **MS** TestCode: **COD_HACH 8** Units: **mg/L** Prep Date: **3/26/2020** RunNo: **230429**
Client ID: **WHCD03** Batch ID: **176339** TestNo: **HACH 8000** Analysis Date: **3/26/2020** SeqNo: **5800439**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	54.08	10	50	0	108	75	125				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: COND_EPA 120.1

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5797997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	155.0	5.00	146.9	0	106	90	110				

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	157.0	5.00	146.9	0	107	90	110				

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	156.0	5.00	146.9	0	106	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5797994**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1422	5.00	1409	0	101	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1416	5.00	1409	0	100	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1438	5.00	1409	0	102	90	110				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: COND_EPA 120.1

Sample ID: **G2003D68-001ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	256.0	5.00						256	0	20	

Sample ID: **G2003C95-003ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798397**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	424.0	5.00						427	0.705	20	

Sample ID: **G2003D14-001ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **EPA 120.1** Analysis Date: **3/26/2020** SeqNo: **5798427**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	477.0	5.00						480	0.627	20	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EDB_8011

Sample ID: **MBLK-176320** SampType: **MBLK** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230600**
Client ID: Batch ID: **176320** TestNo: **EPA 8011** Analysis Date: **3/31/2020** SeqNo: **5805775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	< 0.0400	0.0400									
1,2-Dibromoethane	< 0.0400	0.0400									
Surr: 1,1,2,2-Tetrachloroethane	0.4760	0	0.571	0	83.4	60	140				

Sample ID: **LCS-176320** SampType: **LCS** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230600**
Client ID: Batch ID: **176320** TestNo: **EPA 8011** Analysis Date: **3/31/2020** SeqNo: **5805798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.1940	0.0400	0.25	0	77.6	60	140				
1,2-Dibromoethane	0.2140	0.0400	0.25	0	85.6	60	140				
Surr: 1,1,2,2-Tetrachloroethane	0.4470	0	0.571	0	78.3	60	140				

Sample ID: **G2003D16-002CMS** SampType: **MS** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230600**
Client ID: **RHCD05** Batch ID: **176320** TestNo: **EPA 8011** Analysis Date: **3/31/2020** SeqNo: **5805778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.1810	0.0400	0.25	0	72.4	60	140				
1,2-Dibromoethane	0.2150	0.0400	0.25	0	86.0	60	140				
Surr: 1,1,2,2-Tetrachloroethane	0.4320	0	0.571	0	75.7	60	140				

Sample ID: **G2003D16-002CMS** SampType: **MSD** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230600**
Client ID: **RHCD05** Batch ID: **176320** TestNo: **EPA 8011** Analysis Date: **3/31/2020** SeqNo: **5805779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.1550	0.0400	0.25	0	62.0	60	140	0.181	15.5	20	
1,2-Dibromoethane	0.1840	0.0400	0.25	0	73.6	60	140	0.215	15.5	20	
Surr: 1,1,2,2-Tetrachloroethane	0.3610	0	0.571	0	63.2	60	140	0.432	0	0	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230356**
Client ID: Batch ID: **R230356** TestNo: **EPA 8260 D** Analysis Date: **3/25/2020** SeqNo: **5797928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	< 1.00	1.00									
1,1,1-Trichloroethane	< 1.00	1.00									
1,1,2,2-Tetrachloroethane	< 1.00	1.00									
1,1,2-Trichloroethane	< 1.00	1.00									
1,1-Dichloroethane	< 1.00	1.00									
1,1-Dichloroethene	< 1.00	1.00									
1,1-Dichloropropene	< 1.00	1.00									
1,2,3-Trichlorobenzene	< 5.00	5.00									
1,2,3-Trichloropropane	< 1.00	1.00									
1,2,4-Trichlorobenzene	< 1.00	1.00									
1,2,4-Trimethylbenzene	< 1.00	1.00									
1,2-Dibromo-3-chloropropane	< 5.00	5.00									
1,2-Dibromoethane	< 1.00	1.00									
1,2-Dichlorobenzene	< 1.00	1.00									
1,2-Dichloroethane	< 1.00	1.00									
1,2-Dichloropropane	< 1.00	1.00									
1,3,5-Trimethylbenzene	< 1.00	1.00									
1,3-Dichlorobenzene	< 1.00	1.00									
1,3-Dichloropropane	< 1.00	1.00									
1,4-Dichlorobenzene	< 1.00	1.00									
1,4-Dioxane	< 50.0	50.0									
1-Propanol	< 100	100									
2,2-Dichloropropane	< 1.00	1.00									
2-Butanone	< 5.00	5.00									
2-chloro-1,3-butadiene	< 1.00	1.00									
2-Chlorotoluene	< 1.00	1.00									
2-Hexanone	< 5.00	5.00									
2-Methyl-1-propanol	< 50.0	50.0									
2-Methylnaphthalene	< 20.0	20.0									
2-Nitropropane	< 1.00	1.00									
2-Propanol	< 100	100									
3-Chloro-1-Propene	< 1.00	1.00									
4-Chlorotoluene	< 1.00	1.00									
4-Isopropyltoluene	< 1.00	1.00									
4-Methyl-2-Pentanone	< 1.00	1.00									
Acetone	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230356**
Client ID: Batch ID: **R230356** TestNo: **EPA 8260 D** Analysis Date: **3/25/2020** SeqNo: **5797928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	< 20.0	20.0									
Allyl chloride	< 1.00	1.00									
Benzene	< 1.00	1.00									
Benzyl chloride	< 5.00	5.00									
Bromobenzene	< 1.00	1.00									
Bromochloromethane	< 1.00	1.00									
Bromodichloromethane	< 1.00	1.00									
Bromoform	< 1.00	1.00									
Bromomethane	< 1.00	1.00									
Carbon Disulfide	< 1.00	1.00									
Carbon Tetrachloride	< 1.00	1.00									
Chlorobenzene	< 1.00	1.00									
Chlorodibromomethane	< 1.00	1.00									
Chloroethane	< 1.00	1.00									
Chloroform	< 1.00	1.00									
Chloromethane	< 1.00	1.00									
Chloroprene	< 1.00	1.00									
cis-1,2-Dichloroethene	< 1.00	1.00									
cis-1,3-Dichloropropene	< 1.00	1.00									
Cyclohexane	< 5.00	5.00									
Dibromomethane	< 1.00	1.00									
Dichlorobromomethane	< 1.00	1.00									
Dichlorodifluoromethane	< 1.00	1.00									
Dichlorofluoromethane	< 1.00	1.00									
Diethyl Ether	< 5.00	5.00									
Diisopropyl ether	< 1.00	1.00									
Ethyl acetate	< 5.00	5.00									
Ethyl Methacrylate	< 1.00	1.00									
Ethylbenzene	< 1.00	1.00									
Hexachlorobutadiene	< 5.00	5.00									
Hexachloroethane	< 5.00	5.00									
Iodomethane	< 5.00	5.00									
Isobutyl alcohol	< 50.0	50.0									
Isopropylbenzene	< 1.00	1.00									
m,p-Xylene	< 2.00	2.00									
Methacrylonitrile	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230356**
Client ID: Batch ID: **R230356** TestNo: **EPA 8260 D** Analysis Date: **3/25/2020** SeqNo: **5797928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	< 5.00	5.00									
Methyl methacrylate	< 1.00	1.00									
Methylcyclohexane	< 1.00	1.00									
Methylene Chloride	< 1.00	1.00									
Methyl-tert-butyl ether	< 1.00	1.00									
Naphthalene	< 5.00	5.00									
n-Butanol	< 20.0	20.0									
n-Butylbenzene	< 1.00	1.00									
n-Propylbenzene	< 1.00	1.00									
o-Xylene	< 1.00	1.00									
Pentachloroethane	< 2.00	2.00									
p-Isopropyltoluene	< 1.00	1.00									
Propionitrile	< 10.0	10.0									
sec-Butylbenzene	< 1.00	1.00									
Styrene	< 1.00	1.00									
tert-Butylbenzene	< 1.00	1.00									
Tetrachloroethene	< 1.00	1.00									
Tetrahydrofuran	< 5.00	5.00									
Toluene	< 1.00	1.00									
Total Xylene	< 2.00	2.00									
trans-1,2-Dichloroethene	< 1.00	1.00									
trans-1,3-Dichloropropene	< 1.00	1.00									
trans-1,4-Dichloro-2-butene	< 2.00	2.00									
Tribromomethane	< 1.00	1.00									
Trichloroethene	< 1.00	1.00									
Trichlorofluoromethane	< 1.00	1.00									
Trichloromethane	< 1.00	1.00									
Vinyl Acetate	< 1.00	1.00									
Vinyl Chloride	< 1.00	1.00									
Surr: 1,2-Dichloroethane-d4	32.12	0	30	0	107	70	130				
Surr: 4-Bromofluorobenzene	29.87	0	30	0	99.6	70	130				
Surr: Dibromofluoromethane	29.46	0	30	0	98.2	70	130				
Surr: Toluene-d8	30.52	0	30	0	102	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK**	SampType: **MBLK**	TestCode: **EPA8260_VO**	Units: **µg/L**	Prep Date:	RunNo: **230419**
Client ID:	Batch ID: **R230419**	TestNo: **EPA 8260 D**		Analysis Date: **3/26/2020**	SeqNo: **5800310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	< 1.00	1.00									
1,1,1-Trichloroethane	< 1.00	1.00									
1,1,2,2-Tetrachloroethane	< 1.00	1.00									
1,1,2-Trichloroethane	< 1.00	1.00									
1,1-Dichloroethane	< 1.00	1.00									
1,1-Dichloroethene	< 1.00	1.00									
1,1-Dichloropropene	< 1.00	1.00									
1,2,3-Trichlorobenzene	< 5.00	5.00									
1,2,3-Trichloropropane	< 1.00	1.00									
1,2,4-Trichlorobenzene	< 1.00	1.00									
1,2,4-Trimethylbenzene	< 1.00	1.00									
1,2-Dibromo-3-chloropropane	< 5.00	5.00									
1,2-Dibromoethane	< 1.00	1.00									
1,2-Dichlorobenzene	< 1.00	1.00									
1,2-Dichloroethane	< 1.00	1.00									
1,2-Dichloropropane	< 1.00	1.00									
1,3,5-Trimethylbenzene	< 1.00	1.00									
1,3-Dichlorobenzene	< 1.00	1.00									
1,3-Dichloropropane	< 1.00	1.00									
1,4-Dichlorobenzene	< 1.00	1.00									
1,4-Dioxane	< 50.0	50.0									
1-Propanol	< 100	100									
2,2-Dichloropropane	< 1.00	1.00									
2-Butanone	< 5.00	5.00									
2-chloro-1,3-butadiene	< 1.00	1.00									
2-Chlorotoluene	< 1.00	1.00									
2-Hexanone	< 5.00	5.00									
2-Methyl-1-propanol	< 50.0	50.0									
2-Methylnaphthalene	< 20.0	20.0									
2-Nitropropane	< 1.00	1.00									
2-Propanol	< 100	100									
3-Chloro-1-Propene	< 1.00	1.00									
4-Chlorotoluene	< 1.00	1.00									
4-Isopropyltoluene	< 1.00	1.00									
4-Methyl-2-Pentanone	< 1.00	1.00									
Acetone	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK**	SampType: **MBLK**	TestCode: **EPA8260_VO**	Units: **µg/L**	Prep Date:	RunNo: **230419**
Client ID:	Batch ID: **R230419**	TestNo: **EPA 8260 D**		Analysis Date: **3/26/2020**	SeqNo: **5800310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	< 20.0	20.0									
Allyl chloride	< 1.00	1.00									
Benzene	< 1.00	1.00									
Benzyl chloride	< 5.00	5.00									
Bromobenzene	< 1.00	1.00									
Bromochloromethane	< 1.00	1.00									
Bromodichloromethane	< 1.00	1.00									
Bromoform	< 1.00	1.00									
Bromomethane	< 1.00	1.00									
Carbon Disulfide	< 1.00	1.00									
Carbon Tetrachloride	< 1.00	1.00									
Chlorobenzene	< 1.00	1.00									
Chlorodibromomethane	< 1.00	1.00									
Chloroethane	< 1.00	1.00									
Chloroform	< 1.00	1.00									
Chloromethane	< 1.00	1.00									
Chloroprene	< 1.00	1.00									
cis-1,2-Dichloroethene	< 1.00	1.00									
cis-1,3-Dichloropropene	< 1.00	1.00									
Cyclohexane	< 5.00	5.00									
Dibromomethane	< 1.00	1.00									
Dichlorobromomethane	< 1.00	1.00									
Dichlorodifluoromethane	< 1.00	1.00									
Dichlorofluoromethane	< 1.00	1.00									
Diethyl Ether	< 5.00	5.00									
Diisopropyl ether	< 1.00	1.00									
Ethyl acetate	< 5.00	5.00									
Ethyl Methacrylate	< 1.00	1.00									
Ethylbenzene	< 1.00	1.00									
Hexachlorobutadiene	< 5.00	5.00									
Hexachloroethane	< 5.00	5.00									
Iodomethane	< 5.00	5.00									
Isobutyl alcohol	< 50.0	50.0									
Isopropylbenzene	< 1.00	1.00									
m,p-Xylene	< 2.00	2.00									
Methacrylonitrile	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
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ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	< 5.00	5.00									
Methyl methacrylate	< 1.00	1.00									
Methylcyclohexane	< 1.00	1.00									
Methylene Chloride	< 1.00	1.00									
Methyl-tert-butyl ether	< 1.00	1.00									
Naphthalene	< 5.00	5.00									
n-Butanol	< 20.0	20.0									
n-Butylbenzene	< 1.00	1.00									
n-Propylbenzene	< 1.00	1.00									
o-Xylene	< 1.00	1.00									
Pentachloroethane	< 2.00	2.00									
p-Isopropyltoluene	< 1.00	1.00									
Propionitrile	< 10.0	10.0									
sec-Butylbenzene	< 1.00	1.00									
Styrene	< 1.00	1.00									
tert-Butylbenzene	< 1.00	1.00									
Tetrachloroethene	< 1.00	1.00									
Tetrahydrofuran	< 5.00	5.00									
Toluene	< 1.00	1.00									
Total Xylene	< 2.00	2.00									
trans-1,2-Dichloroethene	< 1.00	1.00									
trans-1,3-Dichloropropene	< 1.00	1.00									
trans-1,4-Dichloro-2-butene	< 2.00	2.00									
Tribromomethane	< 1.00	1.00									
Trichloroethene	< 1.00	1.00									
Trichlorofluoromethane	< 1.00	1.00									
Trichloromethane	< 1.00	1.00									
Vinyl Acetate	< 1.00	1.00									
Vinyl Chloride	< 1.00	1.00									
Surr: 1,2-Dichloroethane-d4	32.40	0	30	0	108	70	130				
Surr: 4-Bromofluorobenzene	29.37	0	30	0	97.9	70	130				
Surr: Dibromofluoromethane	29.05	0	30	0	96.8	70	130				
Surr: Toluene-d8	30.21	0	30	0	101	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230356**
Client ID: Batch ID: **R230356** TestNo: **EPA 8260 D** Analysis Date: **3/25/2020** SeqNo: **5797927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.28	1.00	20	0	106	81	125				
1,1,1-Trichloroethane	20.49	1.00	20	0	102	71	125				
1,1,2,2-Tetrachloroethane	19.92	1.00	20	0	99.6	80	116				
1,1,2-Trichloroethane	20.76	1.00	20	0	104	83	126				
1,1-Dichloroethane	19.98	1.00	20	0	99.9	73	122				
1,1-Dichloroethene	20.21	1.00	20	0	101	74	121				
1,1-Dichloropropene	20.21	1.00	20	0	101	74	120				
1,2,3-Trichlorobenzene	18.54	5.00	20	0	92.7	61	136				
1,2,3-Trichloropropane	20.00	1.00	20	0	100	77	118				
1,2,4-Trichlorobenzene	19.25	1.00	20	0	96.3	68	126				
1,2,4-Trimethylbenzene	19.90	1.00	20	0	99.5	78	128				
1,2-Dibromo-3-chloropropane	21.60	5.00	20	0	108	64	126				
1,2-Dibromoethane	21.03	1.00	20	0	105	83	119				
1,2-Dichlorobenzene	19.85	1.00	20	0	99.3	85	119				
1,2-Dichloroethane	21.13	1.00	20	0	106	72	123				
1,2-Dichloropropane	20.66	1.00	20	0	103	83	122				
1,3,5-Trimethylbenzene	20.00	1.00	20	0	100	85	119				
1,3-Dichlorobenzene	19.92	1.00	20	0	99.6	82	119				
1,3-Dichloropropane	20.36	1.00	20	0	102	80	118				
1,4-Dichlorobenzene	19.75	1.00	20	0	98.7	83	120				
1,4-Dioxane	220.8	50.0	200	0	110	39	186				
1-Propanol	253.9	100	200	0	127	36	170				
2,2-Dichloropropane	21.14	1.00	20	0	106	32	157				
2-Butanone	19.88	5.00	20	0	99.4	61	125				
2-chloro-1,3-butadiene	20.30	1.00	20	0	102	70	124				
2-Chlorotoluene	19.86	1.00	20	0	99.3	82	123				
2-Hexanone	21.32	5.00	20	0	107	58	132				
2-Methyl-1-propanol	193.9	50.0	200	0	96.9	29	163				
2-Methylnaphthalene	< 20.0	20.0	20	0	86.7	41	143				
2-Nitropropane	20.70	1.00	20	0	104	60	138				
2-Propanol	199.3	100	200	0	99.7	43	161				
3-Chloro-1-Propene	21.13	1.00	20	0	106	65	127				
4-Chlorotoluene	19.43	1.00	20	0	97.2	80	121				
4-Isopropyltoluene	19.83	1.00	20	0	99.1	83	117				
4-Methyl-2-Pentanone	20.14	1.00	20	0	101	68	127				
Acetone	18.90	10.0	20	0	94.5	60	133				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230356**
Client ID: Batch ID: **R230356** TestNo: **EPA 8260 D** Analysis Date: **3/25/2020** SeqNo: **5797927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	203.4	20.0	200	0	102	61	132				
Allyl chloride	21.13	1.00	20	0	106	65	127				
Benzene	19.99	1.00	20	0	100	76	122				
Benzyl chloride	19.59	5.00	20	0	97.9	20	154				
Bromobenzene	19.66	1.00	20	0	98.3	78	120				
Bromochloromethane	21.48	1.00	20	0	107	78	124				
Bromodichloromethane	21.41	1.00	20	0	107	71	138				
Bromoform	20.28	1.00	20	0	101	71	125				
Bromomethane	22.66	1.00	20	0	113	47	152				
Carbon Disulfide	19.80	1.00	20	0	99.0	63	123				
Carbon Tetrachloride	20.75	1.00	20	0	104	68	133				
Chlorobenzene	20.49	1.00	20	0	102	83	118				
Chlorodibromomethane	22.08	1.00	20	0	110	74	131				
Chloroethane	22.42	1.00	20	0	112	56	127				
Chloroform	21.02	1.00	20	0	105	73	123				
Chloromethane	21.82	1.00	20	0	109	65	129				
Chloroprene	20.30	1.00	20	0	102	70	124				
cis-1,2-Dichloroethene	20.43	1.00	20	0	102	75	121				
cis-1,3-Dichloropropene	21.27	1.00	20	0	106	71	129				
Cyclohexane	18.89	5.00	20	0	94.5	72	119				
Dibromomethane	21.12	1.00	20	0	106	83	118				
Dichlorobromomethane	21.41	1.00	20	0	107	56	145				
Dichlorodifluoromethane	18.64	1.00	20	0	93.2	60	138				
Dichlorofluoromethane	20.59	1.00	20	0	103	74	123				
Diethyl Ether	19.98	5.00	20	0	99.9	54	142				
Diisopropyl ether	20.05	1.00	20	0	100	72	132				
Ethyl acetate	19.54	5.00	20	0	97.7	77	123				
Ethyl Methacrylate	20.51	1.00	20	0	103	72	126				
Ethylbenzene	20.44	1.00	20	0	102	84	120				
Hexachlorobutadiene	19.24	5.00	20	0	96.2	70	118				
Hexachloroethane	20.42	5.00	20	0	102	59	130				
Iodomethane	25.41	5.00	20	0	127	29	162				
Isobutyl alcohol	193.9	50.0	200	0	96.9	29	163				
Isopropylbenzene	20.56	1.00	20	0	103	83	124				
m,p-Xylene	41.28	2.00	40	0	103	86	117				
Methacrylonitrile	202.4	10.0	200	0	101	69	126				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230356**
Client ID: Batch ID: **R230356** TestNo: **EPA 8260 D** Analysis Date: **3/25/2020** SeqNo: **5797927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	19.88	5.00	20	0	99.4	72	131				
Methyl methacrylate	20.56	1.00	20	0	103	74	122				
Methylcyclohexane	20.46	1.00	20	0	102	76	116				
Methylene Chloride	18.97	1.00	20	0	94.9	73	133				
Methyl-tert-butyl ether	19.91	1.00	20	0	99.6	75	125				
Naphthalene	19.10	5.00	20	0	95.5	59	134				
n-Butanol	180.2	20.0	200	0	90.1	56	152				
n-Butylbenzene	20.05	1.00	20	0	100	79	116				
n-Propylbenzene	19.38	1.00	20	0	96.9	82	119				
o-Xylene	20.32	1.00	20	0	102	86	117				
Pentachloroethane	21.09	2.00	20	0	105	73	123				
p-Isopropyltoluene	19.83	1.00	20	0	99.1	83	117				
Propionitrile	198.2	10.0	200	0	99.1	63	129				
sec-Butylbenzene	20.01	1.00	20	0	100	82	119				
Styrene	20.97	1.00	20	0	105	88	116				
tert-Butylbenzene	19.50	1.00	20	0	97.5	79	127				
Tetrachloroethene	20.08	1.00	20	0	100	76	127				
Tetrahydrofuran	20.76	5.00	20	0	104	62	129				
Toluene	20.47	1.00	20	0	102	80	118				
Total Xylene	61.59	2.00	60	0	103	87	116				
trans-1,2-Dichloroethene	20.45	1.00	20	0	102	73	120				
trans-1,3-Dichloropropene	21.45	1.00	20	0	107	70	126				
trans-1,4-Dichloro-2-butene	19.80	2.00	20	0	99.0	46	137				
Tribromomethane	20.28	1.00	20	0	101	71	125				
Trichloroethene	20.48	1.00	20	0	102	73	123				
Trichlorofluoromethane	20.80	1.00	20	0	104	69	125				
Trichloromethane	21.02	1.00	20	0	105	73	123				
Vinyl Acetate	20.05	1.00	20	0	100	67	131				
Vinyl Chloride	21.48	1.00	20	0	107	56	125				
Surr: 1,2-Dichloroethane-d4	30.05	0	30	0	100	70	130				
Surr: 4-Bromofluorobenzene	29.53	0	30	0	98.4	70	130				
Surr: Dibromofluoromethane	30.02	0	30	0	100	70	130				
Surr: Toluene-d8	29.79	0	30	0	99.3	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.19	1.00	20	0	106	81	125				
1,1,1-Trichloroethane	20.63	1.00	20	0	103	71	125				
1,1,2,2-Tetrachloroethane	20.51	1.00	20	0	103	80	116				
1,1,2-Trichloroethane	21.38	1.00	20	0	107	83	126				
1,1-Dichloroethane	20.14	1.00	20	0	101	73	122				
1,1-Dichloroethene	19.74	1.00	20	0	98.7	74	121				
1,1-Dichloropropene	20.39	1.00	20	0	102	74	120				
1,2,3-Trichlorobenzene	19.52	5.00	20	0	97.6	61	136				
1,2,3-Trichloropropane	21.29	1.00	20	0	106	77	118				
1,2,4-Trichlorobenzene	20.41	1.00	20	0	102	68	126				
1,2,4-Trimethylbenzene	20.37	1.00	20	0	102	78	128				
1,2-Dibromo-3-chloropropane	23.74	5.00	20	0	119	64	126				
1,2-Dibromoethane	21.63	1.00	20	0	108	83	119				
1,2-Dichlorobenzene	20.57	1.00	20	0	103	85	119				
1,2-Dichloroethane	22.01	1.00	20	0	110	72	123				
1,2-Dichloropropane	21.06	1.00	20	0	105	83	122				
1,3,5-Trimethylbenzene	20.43	1.00	20	0	102	85	119				
1,3-Dichlorobenzene	20.09	1.00	20	0	100	82	119				
1,3-Dichloropropane	21.05	1.00	20	0	105	80	118				
1,4-Dichlorobenzene	20.02	1.00	20	0	100	83	120				
1,4-Dioxane	239.8	50.0	200	0	120	39	186				
1-Propanol	278.6	100	200	0	139	36	170				
2,2-Dichloropropane	21.79	1.00	20	0	109	32	157				
2-Butanone	22.34	5.00	20	0	112	61	125				
2-chloro-1,3-butadiene	20.77	1.00	20	0	104	70	124				
2-Chlorotoluene	19.88	1.00	20	0	99.4	82	123				
2-Hexanone	23.28	5.00	20	0	116	58	132				
2-Methyl-1-propanol	209.8	50.0	200	0	105	29	163				
2-Methylnaphthalene	< 20.0	20.0	20	0	97.4	41	143				
2-Nitropropane	20.81	1.00	20	0	104	60	138				
2-Propanol	213.3	100	200	0	107	43	161				
3-Chloro-1-Propene	20.94	1.00	20	0	105	65	127				
4-Chlorotoluene	20.15	1.00	20	0	101	80	121				
4-Isopropyltoluene	20.30	1.00	20	0	102	83	117				
4-Methyl-2-Pentanone	22.08	1.00	20	0	110	68	127				
Acetone	21.01	10.0	20	0	105	60	133				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	205.9	20.0	200	0	103	61	132				
Allyl chloride	20.94	1.00	20	0	105	65	127				
Benzene	19.93	1.00	20	0	99.6	76	122				
Benzyl chloride	20.60	5.00	20	0	103	20	154				
Bromobenzene	20.75	1.00	20	0	104	78	120				
Bromochloromethane	21.28	1.00	20	0	106	78	124				
Bromodichloromethane	21.56	1.00	20	0	108	71	138				
Bromoform	20.14	1.00	20	0	101	71	125				
Bromomethane	22.30	1.00	20	0	112	47	152				
Carbon Disulfide	19.14	1.00	20	0	95.7	63	123				
Carbon Tetrachloride	20.95	1.00	20	0	105	68	133				
Chlorobenzene	20.66	1.00	20	0	103	83	118				
Chlorodibromomethane	22.55	1.00	20	0	113	74	131				
Chloroethane	19.87	1.00	20	0	99.3	56	127				
Chloroform	20.94	1.00	20	0	105	73	123				
Chloromethane	21.36	1.00	20	0	107	65	129				
Chloroprene	20.77	1.00	20	0	104	70	124				
cis-1,2-Dichloroethene	20.57	1.00	20	0	103	75	121				
cis-1,3-Dichloropropene	21.62	1.00	20	0	108	71	129				
Cyclohexane	18.90	5.00	20	0	94.5	72	119				
Dibromomethane	21.48	1.00	20	0	107	83	118				
Dichlorobromomethane	21.56	1.00	20	0	108	56	145				
Dichlorodifluoromethane	20.01	1.00	20	0	100	60	138				
Dichlorofluoromethane	20.71	1.00	20	0	104	74	123				
Diethyl Ether	20.69	5.00	20	0	103	54	142				
Diisopropyl ether	21.17	1.00	20	0	106	72	132				
Ethyl acetate	22.65	5.00	20	0	113	77	123				
Ethyl Methacrylate	21.71	1.00	20	0	109	72	126				
Ethylbenzene	20.44	1.00	20	0	102	84	120				
Hexachlorobutadiene	19.78	5.00	20	0	98.9	70	118				
Hexachloroethane	19.88	5.00	20	0	99.4	59	130				
Iodomethane	24.61	5.00	20	0	123	29	162				
Isobutyl alcohol	209.8	50.0	200	0	105	29	163				
Isopropylbenzene	20.61	1.00	20	0	103	83	124				
m,p-Xylene	41.50	2.00	40	0	104	86	117				
Methacrylonitrile	220.9	10.0	200	0	110	69	126				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	22.34	5.00	20	0	112	72	131				
Methyl methacrylate	21.97	1.00	20	0	110	74	122				
Methylcyclohexane	20.67	1.00	20	0	103	76	116				
Methylene Chloride	18.86	1.00	20	0	94.3	73	133				
Methyl-tert-butyl ether	20.72	1.00	20	0	104	75	125				
Naphthalene	20.70	5.00	20	0	104	59	134				
n-Butanol	198.3	20.0	200	0	99.2	56	152				
n-Butylbenzene	20.37	1.00	20	0	102	79	116				
n-Propylbenzene	20.07	1.00	20	0	100	82	119				
o-Xylene	20.49	1.00	20	0	102	86	117				
Pentachloroethane	21.39	2.00	20	0	107	73	123				
p-Isopropyltoluene	20.30	1.00	20	0	102	83	117				
Propionitrile	213.9	10.0	200	0	107	63	129				
sec-Butylbenzene	19.87	1.00	20	0	99.4	82	119				
Styrene	21.17	1.00	20	0	106	88	116				
tert-Butylbenzene	19.93	1.00	20	0	99.7	79	127				
Tetrachloroethene	20.06	1.00	20	0	100	76	127				
Tetrahydrofuran	22.55	5.00	20	0	113	62	129				
Toluene	21.10	1.00	20	0	105	80	118				
Total Xylene	61.98	2.00	60	0	103	87	116				
trans-1,2-Dichloroethene	20.31	1.00	20	0	102	73	120				
trans-1,3-Dichloropropene	21.95	1.00	20	0	110	70	126				
trans-1,4-Dichloro-2-butene	21.68	2.00	20	0	108	46	137				
Tribromomethane	20.14	1.00	20	0	101	71	125				
Trichloroethene	20.52	1.00	20	0	103	73	123				
Trichlorofluoromethane	20.66	1.00	20	0	103	69	125				
Trichloromethane	20.94	1.00	20	0	105	73	123				
Vinyl Acetate	21.27	1.00	20	0	106	67	131				
Vinyl Chloride	19.96	1.00	20	0	99.8	56	125				
Surr: 1,2-Dichloroethane-d4	30.87	0	30	0	103	70	130				
Surr: 4-Bromofluorobenzene	29.63	0	30	0	98.8	70	130				
Surr: Dibromofluoromethane	29.79	0	30	0	99.3	70	130				
Surr: Toluene-d8	29.99	0	30	0	100	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800311**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	18.98	1.00	20	0	94.9	76	117				
1,1,1-Trichloroethane	19.64	1.00	20	0	98.2	72	122				
1,1,2,2-Tetrachloroethane	18.06	1.00	20	0	90.3	72	110				
1,1,2-Trichloro-1,2,2-Trifluoroethane	19.13	1.00	20	0	95.7	66	123				
1,1,2-Trichloroethane	18.83	1.00	20	0	94.2	76	126				
1,1-Dichloroethane	18.52	1.00	20	0	92.6	66	126				
1,1-Dichloroethene	18.88	1.00	20	0	94.4	66	121				
1,1-Dichloropropene	19.71	1.00	20	0	98.5	71	120				
1,2,3-Trichlorobenzene	17.20	5.00	20	0	86.0	43	148				
1,2,3-Trichloropropane	18.95	1.00	20	0	94.8	72	112				
1,2,3-Trimethylbenzene	18.37	1.00	20	0	91.9	74	118				
1,2,4-Trichlorobenzene	17.64	1.00	20	0	88.2	61	127				
1,2,4-Trimethylbenzene	18.74	1.00	20	0	93.7	78	128				
1,2-Dibromo-3-chloropropane	20.49	5.00	20	0	102	57	121				
1,2-Dibromoethane	18.95	1.00	20	0	94.8	75	113				
1,2-Dichlorobenzene	18.21	1.00	20	0	91.0	76	108				
1,2-Dichloroethane	19.00	1.00	20	0	95.0	69	116				
1,2-Dichloropropane	19.03	1.00	20	0	95.1	78	122				
1,3,5-Trimethylbenzene	19.07	1.00	20	0	95.4	79	111				
1,3-Dichlorobenzene	18.38	1.00	20	0	91.9	71	120				
1,3-Dichloropropane	18.40	1.00	20	0	92.0	76	110				
1,4-Dichlorobenzene	17.96	1.00	20	0	89.8	70	121				
1,4-Dioxane	205.7	50.0	200	0	103	33	189				
1-Propanol	165.0	100	200	0	82.5	46	146				
2,2-Dichloropropane	20.86	1.00	20	0	104	29	160				
2-Butanone	19.47	5.00	20	0	97.4	59	118				
2-chloro-1,3-butadiene	19.86	1.00	20	0	99.3	74	122				
2-Chlorotoluene	18.70	1.00	20	0	93.5	76	115				
2-Hexanone	19.99	5.00	20	0	99.9	63	120				
2-Methyl-1-propanol	176.9	50.0	200	0	88.4	37	145				
2-Methylnaphthalene	< 20.0	20.0	20	0	82.7	24	165				
2-Nitropropane	18.15	1.00	20	0	90.7	57	128				
2-Propanol	184.6	100	200	0	92.3	43	152				
3-Chloro-1-Propene	19.90	1.00	20	0	99.5	64	124				
4-Chlorotoluene	18.46	1.00	20	0	92.3	75	118				
4-Isopropyltoluene	18.77	1.00	20	0	93.8	76	114				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800311**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Methyl-2-Pentanone	19.14	1.00	20	0	95.7	68	116				
Acetone	17.97	10.0	20	0	89.8	51	133				
Acetonitrile	188.5	20.0	200	0	94.2	50	134				
Acrolein	18.79	10.0	20	0	94.0	8	140				
Acrylonitrile	18.57	5.00	20	0	92.8	64	122				
Benzene	18.50	1.00	20	0	92.5	52	125				
Benzyl chloride	18.60	5.00	20	0	93.0	13	141				
Bromobenzene	18.54	1.00	20	0	92.7	75	116				
Bromochloromethane	18.72	1.00	20	0	93.6	71	117				
Bromodichloromethane	19.33	1.00	20	0	96.6	68	132				
Bromoethane	18.32	1.00	20	0	91.6	72	124				
Bromoform	17.76	1.00	20	0	88.8	65	117				
Bromomethane	20.50	1.00	20	0	103	40	156				
Carbon Disulfide	18.18	1.00	20	0	90.9	60	123				
Carbon Tetrachloride	19.75	1.00	20	0	98.7	67	132				
Chlorobenzene	18.60	1.00	20	0	93.0	78	111				
Chlorodibromomethane	19.66	1.00	20	0	98.3	70	123				
Chloroethane	20.36	1.00	20	0	102	46	132				
Chloroform	18.90	1.00	20	0	94.5	69	117				
Chloromethane	20.15	1.00	20	0	101	51	129				
Chloroprene	19.86	1.00	20	0	99.3	68	120				
cis-1,2-Dichloroethene	18.66	1.00	20	0	93.3	71	117				
cis-1,3-Dichloropropene	19.64	1.00	20	0	98.2	71	117				
Cyclohexane	18.07	5.00	20	0	90.3	73	120				
Cyclohexanone	19.33	10.0	20	0	96.7	41	143				
Dibromomethane	18.85	1.00	20	0	94.2	77	110				
Dichlorobromomethane	19.33	1.00	20	0	96.6	74	117				
Dichlorodifluoromethane	19.34	1.00	20	0	96.7	34	140				
Dichlorofluoromethane	19.59	1.00	20	0	98.0	70	123				
Diethyl Ether	18.13	5.00	20	0	90.7	54	142				
Dimethoxymethane	18.47	1.00	20	0	92.4	60	134				
Ethyl acetate	18.67	5.00	20	0	93.3	50	128				
Ethyl Methacrylate	18.80	1.00	20	0	94.0	71	127				
Ethylbenzene	18.91	1.00	20	0	94.5	72	122				
Hexachlorobutadiene	17.83	5.00	20	0	89.1	63	129				
Hexachloroethane	18.43	5.00	20	0	92.2	59	123				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800311**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iodomethane	24.07	5.00	20	0	120	34	150				
Isobutyl alcohol	176.9	50.0	200	0	88.4	38	142				
Isopropylbenzene	18.92	1.00	20	0	94.6	73	124				
m,p-Xylene	38.43	2.00	40	0	96.1	75	119				
Methacrylonitrile	191.1	10.0	200	0	95.5	65	119				
Methyl Acetate	185.4	10.0	200	0	92.7	57	112				
Methyl Ethyl Ketone	19.47	5.00	20	0	97.4	59	121				
Methyl methacrylate	18.95	1.00	20	0	94.8	71	121				
Methylcyclohexane	19.75	1.00	20	0	98.8	70	118				
Methylene Chloride	17.26	1.00	20	0	86.3	64	121				
Methyl-tert-butyl ether	18.06	1.00	20	0	90.3	71	123				
Naphthalene	17.94	5.00	20	0	89.7	48	140				
n-Butanol	167.0	20.0	200	0	83.5	30	146				
n-Butylbenzene	19.15	1.00	20	0	95.7	68	131				
n-Propylbenzene	18.68	1.00	20	0	93.4	72	124				
o-Xylene	18.85	1.00	20	0	94.3	76	118				
Pentachloroethane	18.99	2.00	20	0	95.0	70	122				
p-Isopropyltoluene	18.77	1.00	20	0	93.8	76	114				
Propionitrile	188.4	10.0	200	0	94.2	59	122				
sec-Butylbenzene	18.71	1.00	20	0	93.6	73	120				
Styrene	18.89	1.00	20	0	94.5	78	117				
tert-Butylbenzene	18.65	1.00	20	0	93.2	73	121				
Tetrachloroethene	18.55	1.00	20	0	92.7	67	122				
Tetrahydrofuran	19.13	5.00	20	0	95.6	44	135				
Toluene	19.28	1.00	20	0	96.4	75	115				
Total Xylene	57.28	2.00	60	0	95.5	72	120				
trans-1,2-Dichloroethene	19.11	1.00	20	0	95.6	69	118				
trans-1,3-Dichloropropene	19.40	1.00	20	0	97.0	66	122				
trans-1,4-Dichloro-2-butene	19.36	2.00	20	0	96.8	46	131				
Tribromomethane	17.76	1.00	20	0	88.8	65	117				
Trichloroethene	19.15	1.00	20	0	95.7	75	117				
Trichlorofluoromethane	19.80	1.00	20	0	99.0	69	125				
Trichloromethane	18.90	1.00	20	0	94.5	69	117				
Vinyl Acetate	18.48	1.00	20	0	92.4	46	126				
Vinyl Chloride	19.06	1.00	20	0	95.3	54	128				
Surr: 1,2-Dichloroethane-d4	30.71	0	30	0	102	70	130				

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800311**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	29.94	0	30	0	99.8	70	130				
Surr: Dibromofluoromethane	29.70	0	30	0	99.0	70	130				
Surr: Toluene-d8	29.90	0	30	0	99.7	70	130				
pH	< 0	0	0	0	0	0	0				

Sample ID: **G2003D56-007DMS** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.33	1.00	20	0	96.7	76	117	18.98	1.84	11	
1,1,1-Trichloroethane	20.08	1.00	20	0	100	72	122	19.64	2.23	12	
1,1,2,2-Tetrachloroethane	17.93	1.00	20	0	89.7	72	110	18.06	0.695	14	
1,1,2-Trichloro-1,2,2-Trifluoroethane	19.16	1.00	20	0	95.8	66	123	19.13	0.162	24	
1,1,2-Trichloroethane	19.08	1.00	20	0	95.4	76	126	18.83	1.29	15	
1,1-Dichloroethane	19.22	1.00	20	0	96.1	66	126	18.52	3.72	12	
1,1-Dichloroethene	19.04	1.00	20	0	95.2	66	121	18.88	0.833	14	
1,1-Dichloropropene	19.71	1.00	20	0	98.6	71	120	19.71	0.0152	13	
1,2,3-Trichlorobenzene	16.83	5.00	20	0	84.1	43	148	17.2	2.17	30	
1,2,3-Trichloropropane	18.68	1.00	20	0	93.4	72	112	18.95	1.44	14	
1,2,3-Trimethylbenzene	18.25	1.00	20	0	91.2	74	118	18.37	0.677	22	
1,2,4-Trichlorobenzene	17.87	1.00	20	0	89.3	61	127	17.64	1.26	23	
1,2,4-Trimethylbenzene	18.42	1.00	20	0	92.1	78	128	18.74	1.75	13	
1,2-Dibromo-3-chloropropane	19.50	5.00	20	0	97.5	57	121	20.49	4.97	20	
1,2-Dibromoethane	18.99	1.00	20	0	94.9	75	113	18.95	0.184	17	
1,2-Dichlorobenzene	18.19	1.00	20	0	91.0	76	108	18.21	0.0824	13	
1,2-Dichloroethane	19.72	1.00	20	0	98.6	69	116	19	3.72	11	
1,2-Dichloropropane	19.17	1.00	20	0	95.8	78	122	19.03	0.749	12	
1,3,5-Trimethylbenzene	18.86	1.00	20	0	94.3	79	111	19.07	1.11	13	
1,3-Dichlorobenzene	18.04	1.00	20	0	90.2	71	120	18.38	1.91	16	
1,3-Dichloropropane	18.67	1.00	20	0	93.3	76	110	18.4	1.46	17	
1,4-Dichlorobenzene	18.04	1.00	20	0	90.2	70	121	17.96	0.417	16	
1,4-Dioxane	204.6	50.0	200	0	102	33	189	205.7	0.524	41	
1-Propanol	246.6	100	200	0	123	46	146	165	39.7	38	R
2,2-Dichloropropane	21.09	1.00	20	0	105	29	160	20.86	1.13	13	
2-Butanone	19.17	5.00	20	0	95.9	59	118	19.47	1.54	23	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-chloro-1,3-butadiene	20.21	1.00	20	0	101	74	122	19.86	1.75	12	
2-Chlorotoluene	18.16	1.00	20	0	90.8	76	115	18.7	2.92	16	
2-Hexanone	20.06	5.00	20	0	100	63	120	19.99	0.385	18	
2-Methyl-1-propanol	179.7	50.0	200	0	89.9	37	145	176.9	1.61	24	
2-Methylnaphthalene	< 20.0	20.0	20	0	79.6	24	165	16.55	0	52	
2-Nitropropane	18.57	1.00	20	0	92.8	57	128	18.15	2.29	17	
2-Propanol	186.9	100	200	0	93.4	43	152	184.6	1.25	31	
3-Chloro-1-Propene	20.17	1.00	20	0	101	64	124	19.9	1.34	24	
4-Chlorotoluene	18.28	1.00	20	0	91.4	75	118	18.46	1.00	15	
4-Isopropyltoluene	18.77	1.00	20	0	93.8	76	114	18.77	0.00533	13	
4-Methyl-2-Pentanone	18.86	1.00	20	0	94.3	68	116	19.14	1.47	18	
Acetone	18.30	10.0	20	0	91.5	51	133	17.97	1.82	23	
Acetonitrile	222.7	20.0	200	0	111	50	134	188.5	16.6	28	
Acrolein	18.14	10.0	20	0	90.7	8	140	18.79	3.51	25	
Acrylonitrile	18.99	5.00	20	0	94.9	64	122	18.57	2.22	16	
Benzene	18.88	1.00	20	0	94.4	52	125	18.5	2.05	15	
Benzyl chloride	17.92	5.00	20	0	89.6	13	141	18.6	3.73	22	
Bromobenzene	18.27	1.00	20	0	91.4	75	116	18.54	1.45	15	
Bromochloromethane	19.57	1.00	20	0	97.9	71	117	18.72	4.43	12	
Bromodichloromethane	19.57	1.00	20	0	97.8	68	132	19.33	1.23	18	
Bromoethane	19.13	1.00	20	0	95.7	72	124	18.32	4.36	22	
Bromoform	17.94	1.00	20	0	89.7	65	117	17.76	1.04	14	
Bromomethane	20.67	1.00	20	0	103	40	156	20.5	0.816	22	
Carbon Disulfide	18.84	1.00	20	0	94.2	60	123	18.18	3.55	13	
Carbon Tetrachloride	20.14	1.00	20	0	101	67	132	19.75	1.95	12	
Chlorobenzene	18.81	1.00	20	0	94.0	78	111	18.6	1.08	10	
Chlorodibromomethane	19.80	1.00	20	0	99.0	70	123	19.66	0.679	16	
Chloroethane	19.05	1.00	20	0	95.2	46	132	20.36	6.64	17	
Chloroform	19.76	1.00	20	0	98.8	69	117	18.9	4.43	13	
Chloromethane	20.86	1.00	20	0	104	51	129	20.15	3.43	16	
Chloroprene	20.21	1.00	20	0	101	68	120	19.86	1.75	13	
cis-1,2-Dichloroethene	19.36	1.00	20	0	96.8	71	117	18.66	3.72	12	
cis-1,3-Dichloropropene	19.58	1.00	20	0	97.9	71	117	19.64	0.311	16	
Cyclohexane	18.36	5.00	20	0	91.8	73	120	18.07	1.58	13	
Cyclohexanone	18.09	10.0	20	0	90.5	41	143	19.33	6.62	24	
Dibromomethane	19.15	1.00	20	0	95.8	77	110	18.85	1.59	14	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorobromomethane	19.57	1.00	20	0	97.8	74	117	19.33	1.23	13	
Dichlorodifluoromethane	17.60	1.00	20	0	88.0	34	140	19.34	9.43	18	
Dichlorofluoromethane	19.84	1.00	20	0	99.2	70	123	19.59	1.25	17	
Diethyl Ether	18.08	5.00	20	0	90.4	54	142	18.13	0.298	18	
Dimethoxymethane	18.74	1.00	20	0	93.7	60	134	18.47	1.43	21	
Ethyl acetate	18.88	5.00	20	0	94.4	50	128	18.67	1.14	22	
Ethyl Methacrylate	18.78	1.00	20	0	93.9	71	127	18.8	0.0905	17	
Ethylbenzene	19.04	1.00	20	0	95.2	72	122	18.91	0.706	16	
Hexachlorobutadiene	18.23	5.00	20	0	91.2	63	129	17.83	2.22	21	
Hexachloroethane	18.82	5.00	20	0	94.1	59	123	18.43	2.09	17	
Iodomethane	25.47	5.00	20	0	127	34	150	24.07	5.68	19	
Isobutyl alcohol	179.7	50.0	200	0	89.9	38	142	176.9	1.61	23	
Isopropylbenzene	19.17	1.00	20	0	95.8	73	124	18.92	1.31	15	
m,p-Xylene	38.39	2.00	40	0	96.0	75	119	38.43	0.102	14	
Methacrylonitrile	194.1	10.0	200	0	97.0	65	119	191.1	1.56	14	
Methyl Acetate	182.2	10.0	200	0	91.1	57	112	185.4	1.75	25	
Methyl Ethyl Ketone	19.17	5.00	20	0	95.9	59	121	19.47	1.54	21	
Methyl methacrylate	18.78	1.00	20	0	93.9	71	121	18.95	0.890	14	
Methylcyclohexane	19.54	1.00	20	0	97.7	70	118	19.75	1.08	12	
Methylene Chloride	17.56	1.00	20	0	87.8	64	121	17.26	1.72	17	
Methyl-tert-butyl ether	18.44	1.00	20	0	92.2	71	123	18.06	2.05	14	
Naphthalene	17.48	5.00	20	0	87.4	48	140	17.94	2.59	33	
n-Butanol	159.7	20.0	200	0	79.9	30	146	167	4.42	21	
n-Butylbenzene	18.82	1.00	20	0	94.1	68	131	19.15	1.75	14	
n-Propylbenzene	18.60	1.00	20	0	93.0	72	124	18.68	0.386	15	
o-Xylene	18.92	1.00	20	0	94.6	76	118	18.85	0.355	12	
Pentachloroethane	19.02	2.00	20	0	95.1	70	122	18.99	0.158	14	
p-Isopropyltoluene	18.77	1.00	20	0	93.8	76	114	18.77	0.00533	13	
Propionitrile	191.2	10.0	200	0	95.6	59	122	188.4	1.49	22	
sec-Butylbenzene	18.66	1.00	20	0	93.3	73	120	18.71	0.252	13	
Styrene	19.15	1.00	20	0	95.7	78	117	18.89	1.35	12	
tert-Butylbenzene	18.43	1.00	20	0	92.1	73	121	18.65	1.19	17	
Tetrachloroethene	18.53	1.00	20	0	92.6	67	122	18.55	0.129	16	
Tetrahydrofuran	19.22	5.00	20	0	96.1	44	135	19.13	0.495	21	
Toluene	19.48	1.00	20	0	97.4	75	115	19.28	1.02	13	
Total Xylene	57.31	2.00	60	0	95.5	72	120	57.28	0	18	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2003D56-007DMS** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **230419**
Client ID: Batch ID: **R230419** TestNo: **EPA 8260 D** Analysis Date: **3/26/2020** SeqNo: **5800312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	19.54	1.00	20	0	97.7	69	118	19.11	2.23	13	
trans-1,3-Dichloropropene	19.50	1.00	20	0	97.5	66	122	19.4	0.509	15	
trans-1,4-Dichloro-2-butene	19.54	2.00	20	0	97.7	46	131	19.36	0.925	17	
Tribromomethane	17.94	1.00	20	0	89.7	65	117	17.76	1.04	13	
Trichloroethene	19.29	1.00	20	0	96.5	75	117	19.15	0.770	11	
Trichlorofluoromethane	19.96	1.00	20	0	99.8	69	125	19.8	0.770	15	
Trichloromethane	19.76	1.00	20	0	98.8	69	117	18.9	4.43	12	
Vinyl Acetate	19.02	1.00	20	0	95.1	46	126	18.48	2.86	11	
Vinyl Chloride	19.74	1.00	20	0	98.7	54	128	19.06	3.52	15	
Surr: 1,2-Dichloroethane-d4	31.43	0	30	0	105	70	130	30.71	0	0	
Surr: 4-Bromofluorobenzene	29.54	0	30	0	98.5	70	130	29.94	0	0	
Surr: Dibromofluoromethane	30.61	0	30	0	102	70	130	29.7	0	0	
Surr: Toluene-d8	29.77	0	30	0	99.2	70	130	29.9	0	0	
pH	< 0	0	0	0	0	0	0	0	0	0	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_7470

Sample ID: **PB-176312** SampType: **PB** TestCode: **HG_7470** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230360**
Client ID: Batch ID: **176312** TestNo: **EPA 7470** Analysis Date: **3/26/2020** SeqNo: **5813257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	< 0.000200	0.000200									

Sample ID: **LCS-176312** SampType: **LCS** TestCode: **HG_7470** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230360**
Client ID: Batch ID: **176312** TestNo: **EPA 7470** Analysis Date: **3/26/2020** SeqNo: **5813256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.002120	0.000200	0.002	0	106	85	115				

Sample ID: **G2003D16-002EMS** SampType: **MS** TestCode: **HG_7470** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230360**
Client ID: **RHCD05** Batch ID: **176312** TestNo: **EPA 7470** Analysis Date: **3/26/2020** SeqNo: **5798177**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.002300	0.000200	0.002	0.000409	94.6	85	115				

Sample ID: **G2003D16-003EMS** SampType: **MS** TestCode: **HG_7470** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230360**
Client ID: **RHCD04** Batch ID: **176312** TestNo: **EPA 7470** Analysis Date: **3/26/2020** SeqNo: **5798191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.002210	0.000200	0.002	0	110	85	115				

Sample ID: **G2003C32-001HMS** SampType: **MS** TestCode: **HG_7470** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230360**
Client ID: Batch ID: **176312** TestNo: **EPA 7470** Analysis Date: **3/26/2020** SeqNo: **5798193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004560	0.000400	0.004	0.000284	107	85	115				

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TestCode: IC_300.0_28

Sample ID: **LFB** SampType: **LFB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	4.714	0.200	5	0	94.3	90	110				
Chloride	49.12	1.00	50	0	98.2	90	110				
Fluoride	5.275	0.100	5	0	106	90	110				
Sulfate	48.66	2.00	50	0	97.3	90	110				

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

Sample ID: **QCS** SampType: **QCS** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	7.882	0.200	8	0	98.5	90	110				
Chloride	23.52	1.00	24	0	98.0	90	110				
Fluoride	4.249	0.100	4	0	106	90	110				
Sulfate	31.25	2.00	32	0	97.7	90	110				

Sample ID: **HRQC** SampType: **HRQC** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	252.5	1.00	250	0	101	90	110				
Sulfate	252.7	2.00	250	0	101	90	110				

Sample ID: **G2003D16-001DLFM** SampType: **LFM** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: **RHCD06** Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	43.03	1.00	15	29.429	90.7	80	120				

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TestCode: IC_300.0_28

Sample ID: **G2003D16-001DLFM** SampType: **LFM** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: **RHCD06** Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	27.77	2.00	20	8.318	97.2	80	120				

Sample ID: **G2003D30-002ELFM** SampType: **LFM** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	145.6	1.00	15	134.22	75.8	80	120				1
Sulfate	197.2	2.00	20	180.48	83.4	80	120				

Sample ID: **G2003C78-001DLFM** SampType: **LFM** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/26/2020** SeqNo: **5800006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	21.47	1.00	15	6.5351	99.6	80	120				
Sulfate	732.7	2.00	20	802.2	-348	80	120				1

Sample ID: **LFB** SampType: **LFB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/26/2020** SeqNo: **5800009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	4.794	0.200	5	0	95.9	90	110				
Chloride	49.81	1.00	50	0	99.6	90	110				
Fluoride	4.958	0.100	5	0	99.2	90	110				
Sulfate	49.08	2.00	50	0	98.2	90	110				

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/26/2020** SeqNo: **5800011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

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ANALYTICAL QC SUMMARY REPORT

TestCode: IC_300.0_28

Sample ID: **QCS** SampType: **QCS** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/26/2020** SeqNo: **5800012**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	7.976	0.200	8	0	99.7	90	110				
Chloride	23.71	1.00	24	0	98.8	90	110				
Fluoride	4.049	0.100	4	0	101	90	110				
Sulfate	31.35	2.00	32	0	98.0	90	110				

Sample ID: **HRQC** SampType: **HRQC** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/26/2020** SeqNo: **5800013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	254.2	1.00	250	0	102	90	110				
Sulfate	253.3	2.00	250	0	101	90	110				

Sample ID: **G2003D16-001DDU** SampType: **DUP** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: **RHCD06** Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	29.34	1.00						29.43	0.291	20	
Sulfate	8.292	2.00						8.318	0.310	20	

Sample ID: **G2003D30-002EDUP** SampType: **DUP** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/25/2020** SeqNo: **5799990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	134.4	1.00						134.2	0.150	20	
Sulfate	180.8	2.00						180.5	0.202	20	

Sample ID: **G2003C78-001DDU** SampType: **DUP** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230410**
Client ID: Batch ID: **176321** TestNo: **EPA 300.0** Analysis Date: **3/26/2020** SeqNo: **5800005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	6.529	1.00						6.535	0.0955	20	
Sulfate	812.3	2.00						802.2	1.25	20	

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TestCode: ME_3010_6010

Sample ID: **PB-176304** SampType: **PB** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	< 0.100	0.100									
Arsenic	< 0.0200	0.0200									
Barium	< 0.0100	0.0100									
Beryllium	< 0.00100	0.00100									
Boron	< 0.0500	0.0500									
Cadmium	< 0.00200	0.00200									
Calcium	< 0.100	0.100									
Chromium	< 0.0100	0.0100									
Cobalt	< 0.00500	0.00500									
Copper	< 0.0100	0.0100									
Iron	< 0.0500	0.0500									
Lead	< 0.0200	0.0200									
Magnesium	< 0.100	0.100									
Manganese	< 0.0100	0.0100									
Molybdenum	< 0.0200	0.0200									
Nickel	< 0.0100	0.0100									
Potassium	< 0.500	0.500									
Selenium	< 0.0200	0.0200									
Silver	< 0.00500	0.00500									
Sodium	< 0.200	0.200									
Strontium	< 0.0100	0.0100									
Sulfur	< 0.100	0.100									
Thallium	< 0.0200	0.0200									
Tin	< 0.100	0.100									
Titanium	< 0.00500	0.00500									
Vanadium	< 0.00500	0.00500									
Zinc	< 0.0100	0.0100									

Sample ID: **LCS1-176304** SampType: **LCS1** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.9953	0.100	1	0	99.5	85	115				
Arsenic	0.9854	0.0200	1	0	98.5	85	115				
Barium	0.9867	0.0100	1	0	98.7	85	115				

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ANALYTICAL QC SUMMARY REPORT

TestCode: ME_3010_6010

Sample ID: **LCS1-176304** SampType: **LCS1** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1860	0.00100	0.2	0	93.0	85	115				
Boron	0.9665	0.0500	1	0	96.6	85	115				
Cadmium	0.3854	0.00200	0.4	0	96.4	85	115				
Calcium	9.693	0.100	10	0	96.9	85	115				
Chromium	0.9611	0.0100	1	0	96.1	85	115				
Cobalt	0.3877	0.00500	0.4	0	96.9	85	115				
Copper	1.009	0.0100	1	0	101	85	115				
Iron	9.861	0.0500	10	0	98.6	85	115				
Lead	0.9791	0.0200	1	0	97.9	85	115				
Magnesium	1.973	0.100	2	0	98.6	85	115				
Manganese	1.003	0.0100	1	0	100	85	115				
Molybdenum	0.3773	0.0200	0.4	0	94.3	85	115				
Nickel	1.005	0.0100	1	0	100	85	115				
Potassium	9.836	0.500	10	0	98.4	85	115				
Selenium	0.9496	0.0200	1	0	95.0	85	115				
Silver	0.009300	0.00500	0.01	0	93.0	85	115				
Sodium	9.924	0.200	10	0	99.2	85	115				
Strontium	0.9908	0.0100	1	0	99.1	85	115				
Sulfur	19.62	0.100	20	0	98.1	85	115				
Thallium	0.9889	0.0200	1	0	98.9	85	115				
Tin	0.9849	0.100	1	0	98.5	85	115				
Titanium	0.9859	0.00500	1	0	98.6	85	115				
Vanadium	0.3900	0.00500	0.4	0	97.5	85	115				
Zinc	0.9937	0.0100	1	0	99.4	85	115				

Sample ID: **G2003D16-001EMS** SampType: **MS** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: **RHCD06** Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.013	0.100	1	0	101	75	125				
Arsenic	1.019	0.0200	1	0	102	75	125				
Barium	1.310	0.0100	1	0.3276	98.3	75	125				
Beryllium	0.1868	0.00100	0.2	0	93.4	75	125				
Boron	1.276	0.0500	1	0.2859	99.0	75	125				
Cadmium	0.3830	0.00200	0.4	0	95.8	75	125				

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TestCode: ME_3010_6010

Sample ID: **G2003D16-001EMS** SampType: **MS** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: **RHCD06** Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	23.74	0.100	10	14.088	96.5	75	125				
Chromium	0.9562	0.0100	1	0	95.6	75	125				
Cobalt	0.3864	0.00500	0.4	0.0081	94.6	75	125				
Copper	1.032	0.0100	1	0	103	75	125				
Iron	19.61	0.0500	10	9.8722	97.3	75	125				
Lead	0.9681	0.0200	1	0	96.8	75	125				
Magnesium	21.72	0.100	2	19.899	90.8	75	125				
Manganese	5.046	0.0100	1	4.1468	89.9	75	125				
Molybdenum	0.3854	0.0200	0.4	0	96.4	75	125				
Nickel	0.9845	0.0100	1	0	98.5	75	125				
Potassium	16.04	0.500	10	5.8968	101	75	125				
Selenium	0.9714	0.0200	1	0	97.1	75	125				
Silver	0.01000	0.00500	0.01	0	100	75	125				
Sodium	27.05	0.200	10	16.789	103	75	125				
Strontium	1.137	0.0100	1	0.1506	98.7	75	125				
Thallium	0.9879	0.0200	1	0	98.8	75	125				
Tin	0.9895	0.100	1	0	99.0	75	125				
Titanium	1.002	0.00500	1	0	100	75	125				
Vanadium	0.3968	0.00500	0.4	0	99.2	75	125				
Zinc	0.9821	0.0100	1	0	98.2	75	125				

Sample ID: **G2003D25-002DMS** SampType: **MS** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.007	0.100	1	0	101	75	125				
Arsenic	0.9985	0.0200	1	0	99.8	75	125				
Barium	0.9955	0.0100	1	0	99.6	75	125				
Beryllium	0.1870	0.00100	0.2	0	93.5	75	125				
Boron	0.9853	0.0500	1	0	98.5	75	125				
Cadmium	0.3881	0.00200	0.4	0	97.0	75	125				
Calcium	9.819	0.100	10	0.0547	97.6	75	125				
Chromium	0.9699	0.0100	1	0	97.0	75	125				
Cobalt	0.3910	0.00500	0.4	0	97.8	75	125				
Copper	1.041	0.0100	1	0	104	75	125				

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TestCode: ME_3010_6010

Sample ID: **G2003D25-002DMS** SampType: **MS** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9.965	0.0500	10	0	99.7	75	125				
Lead	0.9881	0.0200	1	0	98.8	75	125				
Magnesium	1.987	0.100	2	0	99.3	75	125				
Manganese	1.014	0.0100	1	0	101	75	125				
Molybdenum	0.3808	0.0200	0.4	0	95.2	75	125				
Nickel	1.011	0.0100	1	0	101	75	125				
Potassium	10.10	0.500	10	0	101	75	125				
Selenium	0.9668	0.0200	1	0	96.7	75	125				
Silver	0.009700	0.00500	0.01	0	97.0	75	125				
Sodium	10.57	0.200	10	0.358	102	75	125				
Strontium	0.9965	0.0100	1	0	99.7	75	125				
Thallium	1.001	0.0200	1	0	100	75	125				
Tin	1.002	0.100	1	0	100	75	125				
Titanium	0.9956	0.00500	1	0	99.6	75	125				
Vanadium	0.3952	0.00500	0.4	0	98.8	75	125				
Zinc	0.9950	0.0100	1	0	99.5	75	125				

Sample ID: **G2003D16-001EDUP** SampType: **DUP** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: **RHCD06** Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	< 0.100	0.100						0	0	20	
Arsenic	< 0.0200	0.0200						0	0	20	
Barium	0.3161	0.0100						0.3276	3.57	20	
Beryllium	< 0.00100	0.00100						0	0	20	
Boron	0.2766	0.0500						0.2859	3.31	20	
Cadmium	< 0.00200	0.00200						0	0	20	
Calcium	13.60	0.100						14.09	3.52	20	
Chromium	< 0.0100	0.0100						0	0	20	
Cobalt	0.008000	0.00500						0.0081	1.24	20	
Copper	< 0.0100	0.0100						0	0	20	
Iron	9.624	0.0500						9.872	2.55	20	
Lead	< 0.0200	0.0200						0	0	20	
Magnesium	19.19	0.100						19.9	3.62	20	
Manganese	4.007	0.0100						4.147	3.44	20	

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TestCode: ME_3010_6010

Sample ID: **G2003D16-001EDUP** SampType: **DUP** TestCode: **ME_3010_60** Units: **mg/L** Prep Date: **3/25/2020** RunNo: **230387**
Client ID: **RHCD06** Batch ID: **176304** TestNo: **EPA 6010 D** Analysis Date: **3/26/2020** SeqNo: **5798865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	< 0.0200	0.0200						0	0	20	
Nickel	< 0.0100	0.0100						0	0	20	
Potassium	5.681	0.500						5.897	3.73	20	
Selenium	< 0.0200	0.0200						0	0	20	
Silver	< 0.00500	0.00500						0	0	20	
Sodium	16.14	0.200						16.79	3.95	20	
Strontium	0.1455	0.0100						0.1506	3.44	20	
Thallium	< 0.0200	0.0200						0	0	20	
Tin	< 0.100	0.100						0	0	20	
Titanium	< 0.00500	0.00500						0	0	20	
Vanadium	< 0.00500	0.00500						0	0	20	
Zinc	< 0.0100	0.0100						0	0	20	

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ANALYTICAL QC SUMMARY REPORT

TestCode: ME_3010_6020

Sample ID: **PB-176305** SampType: **PB** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230418**
Client ID: Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/26/2020** SeqNo: **5800281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 1.00	1.00									
Barium	< 5.00	5.00									
Cadmium	< 0.200	0.200									
Chromium	< 1.00	1.00									
Cobalt	< 0.500	0.500									
Copper	< 1.00	1.00									
Lead	< 1.00	1.00									
Nickel	< 0.500	0.500									
Selenium	< 1.00	1.00									
Silver	< 0.200	0.200									
Thallium	< 0.200	0.200									
Uranium	< 1.00	1.00									
Zinc	< 5.00	5.00									

Sample ID: **LCS2-176305** SampType: **LCS2** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230418**
Client ID: Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/26/2020** SeqNo: **5800282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	8.247	1.00	6	0	137	85	115				NA
Arsenic	10.06	1.00	10	0	101	85	115				
Barium	48.64	5.00	50	0	97.3	85	115				
Cadmium	4.920	0.200	5	0	98.4	85	115				
Chromium	47.78	1.00	50	0	95.6	85	115				
Cobalt	19.50	0.500	20	0	97.5	85	115				
Copper	49.21	1.00	50	0	98.4	85	115				
Lead	4.816	1.00	5	0	96.3	85	115				
Nickel	48.49	0.500	50	0	97.0	85	115				
Selenium	20.05	1.00	20	0	100	85	115				
Silver	4.931	0.200	5	0	98.6	85	115				
Thallium	1.793	0.200	2	0	89.7	85	115				
Uranium	19.30	1.00	20	0	96.5	85	115				
Zinc	47.21	5.00	50	0	94.4	85	115				

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TestCode: ME_3010_6020

Sample ID: **PB-176305** SampType: **PB** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230539**
Client ID: Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/31/2020** SeqNo: **5803525**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	< 1.00	1.00									

Sample ID: **LCS2-176305** SampType: **LCS2** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230539**
Client ID: Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/31/2020** SeqNo: **5803526**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	4.062	1.00	4	0	102	85	115				

Sample ID: **G2003D21-001EMS** SampType: **MS** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230418**
Client ID: Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/26/2020** SeqNo: **5800294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	6.813	1.00	6	1.464	89.2	75	125				
Arsenic	10.34	1.00	10	0	103	75	125				
Barium	182.0	5.00	50	137.15	89.6	75	125				
Beryllium	3.377	1.00	4	0	84.4	75	125				
Cadmium	4.858	0.200	5	0	97.2	75	125				
Chromium	47.38	1.00	50	0	94.8	75	125				
Cobalt	19.14	0.500	20	0.378	93.8	75	125				
Copper	46.82	1.00	50	0.737	92.2	75	125				
Lead	5.393	1.00	5	0.424	99.4	75	125				
Nickel	47.27	0.500	50	0.384	93.8	75	125				
Selenium	18.15	1.00	20	0	90.7	75	125				
Silver	4.848	0.200	5	0	97.0	75	125				
Thallium	1.802	0.200	2	0	90.1	75	125				
Uranium	18.62	1.00	20	0	93.1	75	125				
Zinc	46.56	5.00	50	0	93.1	75	125				

Sample ID: **G2003D16-001EDUP** SampType: **DUP** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230418**
Client ID: **RHCD06** Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/26/2020** SeqNo: **5800284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.991	1.00						2.439	20.2	20	R
Arsenic	2.606	1.00						3.003	14.2	20	
Barium	314.2	5.00						315.2	0.299	20	

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TestCode: ME_3010_6020

Sample ID: **G2003D16-001EDUP** SampType: **DUP** TestCode: **ME_3010_60** Units: **µg/L** Prep Date: **3/25/2020** RunNo: **230418**
Client ID: **RHCD06** Batch ID: **176305** TestNo: **EPA 6020 B** Analysis Date: **3/26/2020** SeqNo: **5800284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	< 1.00	1.00						0	0	20	
Cadmium	< 0.200	0.200						0	0	20	
Chromium	< 1.00	1.00						0	0	20	
Cobalt	8.345	0.500						8.442	1.16	20	
Copper	< 1.00	1.00						0	0	20	
Lead	< 1.00	1.00						0.313	0	20	
Nickel	< 0.500	0.500						0.506	0	20	
Selenium	< 1.00	1.00						0	0	20	
Silver	< 0.200	0.200						0	0	20	
Thallium	0.3220	0.200						0.309	4.12	20	
Uranium	< 1.00	1.00						0	0	20	
Zinc	< 5.00	5.00						0	0	20	

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ANALYTICAL QC SUMMARY REPORT

TestCode: NH3_350.1

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.8078	0.100	0.82	0	98.5	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.8414	0.100	0.82	0	103	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.8305	0.100	0.82	0	101	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.8220	0.100	0.82	0	100	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799287**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.8335	0.100	0.82	0	102	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799314**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7891	0.100	0.82	0	96.2	90	110				

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TestCode: NH3_350.1

Sample ID: **G2003C92-001AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799149**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.296	0.100	1	0.27355	102	90	110				

Sample ID: **G2003C30-004AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.094	0.100	1	0.065101	103	90	110				

Sample ID: **G2003C39-002AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	2.002	0.100	1	0.98281	102	90	110				

Sample ID: **G2003C73-006AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.069	0.100	1	0	107	90	110				

Sample ID: **G2003C88-003CMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.094	0.100	1	0.056297	104	90	110				

Sample ID: **G2003C96-001BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799245**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.795	0.100	1	0.77447	102	90	110				

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TestCode: NH3_350.1

Sample ID: **G2003D14-001BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799264**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.050	0.100	1	0	105	90	110				

Sample ID: **G2003D25-002AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.043	0.100	1	0	104	90	110				

Sample ID: **G2003D30-004BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.343	0.100	1	0.26104	108	90	110				

Sample ID: **G2003D35-002AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.118	0.100	1	0.045736	107	90	110				

Sample ID: **G2003D41-005AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.301	0.100	1	0.27768	102	90	110				

Sample ID: **G2003C92-001ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.2719	0.100						0.2736	0.621	20	

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TestCode: NH3_350.1

Sample ID: **G2003C30-004ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0.0651	0	20	

Sample ID: **G2003C39-002ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.9825	0.100						0.9828	0.0293	20	

Sample ID: **G2003C73-006ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0	0	20	

Sample ID: **G2003C88-003CDU** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799220**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0.0563	0	20	

Sample ID: **G2003C96-001BDU** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7701	0.100						0.7745	0.561	20	

Sample ID: **G2003D14-001BDU** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799263**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0	0	20	

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TestCode: NH3_350.1

Sample ID: **G2003D25-002ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0	0	20	

Sample ID: **G2003D30-004BDU** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799299**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.2623	0.100						0.261	0.466	20	

Sample ID: **G2003D35-002ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0.04574	0	20	

Sample ID: **G2003D41-005ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **230392**
Client ID: Batch ID: **R230392** TestNo: **EPA 350.1** Analysis Date: **3/25/2020** SeqNo: **5799322**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.2785	0.100						0.2777	0.288	20	

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ANALYTICAL QC SUMMARY REPORT

TestCode: NO3-NO2_353.2

Sample ID: **LCS-176259** SampType: **LCS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.9820	0.0500	1	0	98.2	90	110				

Sample ID: **LCS-176333** SampType: **LCS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/26/2020** RunNo: **230408**
Client ID: Batch ID: **176333** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.9810	0.0500	1	0	98.1	90	110				

Sample ID: **G2003B87-001AMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/26/2020** RunNo: **230408**
Client ID: Batch ID: **176333** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799804**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	1.246	0.0500	1	0.256	99.0	90	110				

Sample ID: **G2003C87-001AMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	2.306	0.0500	1	1.295	101	90	110				

Sample ID: **G2003C87-006AMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	1.238	0.0500	1	0.206	103	90	110				

Sample ID: **G2003D37-001DMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/26/2020** RunNo: **230408**
Client ID: Batch ID: **176333** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	1888	50.0	1000	863	103	90	110				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: NO3-NO2_353.2

Sample ID: **G2003859-001BMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	1.160	0.0500	1	0.12	104	90	110				

Sample ID: **G2003B87-001ADUP** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/26/2020** RunNo: **230408**
Client ID: Batch ID: **176333** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.2330	0.0500						0.256	9.41	20	

Sample ID: **G2003C87-001ADUP** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	1.297	0.0500						1.295	0.154	20	

Sample ID: **G2003C87-006ADUP** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799859**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.2090	0.0500						0.206	1.45	20	

Sample ID: **G2003D37-001DDU** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/26/2020** RunNo: **230408**
Client ID: Batch ID: **176333** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	871.0	50.0						863	0.923	20	

Sample ID: **G2003859-001BDUP** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **3/25/2020** RunNo: **230408**
Client ID: Batch ID: **176259** TestNo: **EPA 353.2** Analysis Date: **3/26/2020** SeqNo: **5799923**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.09900	0.0500						0.12	19.2	20	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: PH_4500_HB

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **SM 4500-H+** Analysis Date: **3/26/2020** SeqNo: **5797991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.030	0	7	0	100	98	102				

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **SM 4500-H+** Analysis Date: **3/26/2020** SeqNo: **5798103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.040	0	7	0	101	98	102				

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **SM 4500-H+** Analysis Date: **3/26/2020** SeqNo: **5798491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.040	0	7	0	101	98	102				

Sample ID: **G2003D68-001ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **SM 4500-H+** Analysis Date: **3/26/2020** SeqNo: **5798079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.130	0						7.12	0.140	20	H

Sample ID: **G2003C95-003ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **SM 4500-H+** Analysis Date: **3/26/2020** SeqNo: **5798398**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.630	0						7.61	0.262	20	H

Sample ID: **G2003D14-001ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **SM 4500-H+** Analysis Date: **3/26/2020** SeqNo: **5798429**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	6.820	0						6.78	0.588	20	H

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: TDS_SM 2540-C

Sample ID: **LCS-176272**	SampType: **LCS**	TestCode: **TDS_SM 254**	Units: **mg/L**	Prep Date: **3/25/2020**	RunNo: **230388**
Client ID:	Batch ID: **176272**	TestNo: **SM 2540 C**		Analysis Date: **3/25/2020**	SeqNo: **5799044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	294.0	20.0	292	0	101	85	115				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: TURB_EPA 180.1

Sample ID: **G2003D16-001DDU** SampType: **DUP** TestCode: **TURB_EPA 1** Units: **NTU** Prep Date: **3/25/2020** RunNo: **230362**
Client ID: **RHCD06** Batch ID: **176254** TestNo: **EPA 180.1** Analysis Date: **3/25/2020** SeqNo: **5798253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	30.00	0.10						30	0	20	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2003D16
Project: Hunting Ridge LF 221SA

ANALYTICAL QC SUMMARY REPORT

TestCode: WATER_ALK_D1067

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **ASTM D 1067** Analysis Date: **3/26/2020** SeqNo: **5798105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	50.00	10.0	47.5	0	105	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **ASTM D 1067** Analysis Date: **3/26/2020** SeqNo: **5798419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	46.00	10.0	47.5	0	96.8	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **ASTM D 1067** Analysis Date: **3/26/2020** SeqNo: **5798492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	47.00	10.0	47.5	0	98.9	85	115				

Sample ID: **G2003C95-003ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **ASTM D 1067** Analysis Date: **3/26/2020** SeqNo: **5798399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	194.0	10.0						194	0	20	

Sample ID: **G2003D14-001ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **230358**
Client ID: Batch ID: **R230358** TestNo: **ASTM D 1067** Analysis Date: **3/26/2020** SeqNo: **5798431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	95.00	10.0						95	0	20	

GLOSSARY OF TERMS

Aliquot: A separate measured and representative portion of a sample used for analysis.

Analyte: The specific chemicals or components that a sample is used for analysis.

Acceptance Criteria: Specified limits established either from a method or by the laboratory for a target analyte.

Accuracy: The measured agreement between an observed value and an accepted reference value.

Corporate Detection Limit (CDL): The value based on method detection limits that may encompass multiple studies generated from several instruments. The CDL is based on the highest MDL study and is rounded to a useable value.

Corporate Quantitation Limit (CQL): The laboratory's lowest level of data quantification for reporting a target analyte at a concentration level that does not require use of data qualifiers. The CQL is calculated as two times the Corporate Detection Limit (CDL) or two times the CDL times any dilution factor.

Batch: Samples prepared or analyzed together with the same process and personnel, using the same lot(s) of reagents. A **preparation batch** is a group of one to twenty samples of the same defined matrix, meeting the above-mentioned conditions and with a maximum time between the start of processing of the first and last sample in the batch to be 24 hours. An **analytical batch** is compromised of prepared samples (extracts, digestate or concentrates) that are analyzed together as a group. An analytical batch can include prepared samples originating from various sample matrices and may exceed 20 samples.

Chain of Custody: A form that documents the possession of the samples from the time of collection to lab receipt. This record includes: sample matrix, the number and types of containers; the mode of collection; collector; time of collection; preservation and requested analyses.

Equipment Blank: Sampling equipment rinsed with laboratory water immediately before use in sampling with the rinsing submitted to the laboratory as a sample for analysis. Data from the analysis of equipment blanks provides a check on sampling device cleanliness.

Field Duplicate: Two separate samples taken from the same source (e.g. monitoring well) and analyzed independently. The data obtained from field duplicate samples is used to evaluate the variability of the sampling procedures and the source form which the sample was obtained. There are no acceptance criteria for comparing field duplicate data results.

Laboratory Control Sample (LCS): A sample matrix, free from the analytes of interest, spiked with known amounts of analytes or a material containing known and verified amounts of analytes. It is used to establish intra-laboratory or analyst-specific precision and bias or to assess the performance of a method.

Matrix: The component or substrate that contains the analyte of interest. For purposes of batch and QC requirement determinations, the following matrix distinctions are used:

Aqueous: Any aqueous sample excluded from the definition of Drinking Water matrix or Saline/Estuarine source. Includes surface water, groundwater, effluents and TCLP or other extracts.

Drinking water: Any aqueous sample designated a potable or potential potable water source.

Non-aqueous Liquid: Any organic liquid with < 15% settable solids.

Solids: Includes soils, sediments, sludges and other matrices with > 15% settable solids.

Chemical Waste: A product or by-product of an industrial process that results in a matrix not previously defined.

Matrix Spike (MS): A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. Matrix spikes are used to determine the effect of the matrix on a method's recovery efficiency. Calculation of recovery data is not quality assessed when the concentration of the target analyte in the unspiked sample is greater than or equal to 4x the spiking concentration.

Matrix Spike Duplicate (MSD): A second replicate matrix spike prepared in the laboratory and analyzed to obtain a measure of the precision of the recovery for each analyte. Calculation of recovery data is not required when the concentration of the target analyte in the unspiked sample is greater than or equal to 4x the spiking solution.

Method Detection Limit (MDL): The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in deionized water containing the analyte. MDLs are verified annually and are subject to change.

Preservation: Refrigeration and/or reagents added at the time of sample collection to maintain the chemical and/or biological integrity of the sample.

Recovery: the total amount of the analyte found in the sample divided by the amount of the analyte added into the sample as a spike.

Relative Percent Difference (RPD): The difference between two values divided by the average of the values, expressed as percent. Quality assessment on RPD is not used when at least one of the two values is less than or equal to 5x the reporting limit; assessment between the two values is based on whether the absolute difference is at or within 2x the reporting limit.

Reporting Limit: A data value set by the laboratory based on the CDL and CQL. Any value at or above the CQL requires no qualification. Any reported values required by the client from an analysis that shows non-detect at the CDL is flagged with a "U" qualifier. Any reported value required by the client when an analyte is detected between the CDL and CQL is flagged with a "J" and that reports the result as an estimated value.

Sample: A portion for analysis in a single, or multiple containers with a composition known to the submitter and identified by the lab number to the analyst.

Surrogate: Compounds added to the sample before preparation, then measured after analysis to detect problems in the sample preparation procedure.

Form F-5002, 05.19 *** Lab Work Order #	G2003D16

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Pennsylvania Chain of Custody (COC)

Shuttle/Cooler ID#

Billing Client

Company: Tetra Tech	Name: Andrew Smith	E-mail Address: andrew.smith2@tetratech.com
Mailing Address: 980 Awald Rd	Telephone No.: 443-610-3290	Landfill Site: Hunting Ridge
City, State, Zip: Annapolis, MD	State Sampled: MD / PWS Number:	Date Results Required:

Special Instructions/Project ID's/Analyte List: 221SA

*PC-1: Nitric acid (HNO_3)
*PC-2: Hydrochloric acid (HCL)
*PC-3: Sulfuric acid (H_2SO_4)
*PC-4: Sodium Hydroxide (NaOH)
*PC-5: Sodium Thiosulfate ($Na_2S_2O_3$)
*PC-6: Ascorbic acid ($C_6H_8O_6$)
*PC-7: Zinc acetate ($C_4H_6O_4Zn$)
*PC-8: Ammonium chloride (NH_4CL)
*PC9: Copper Sulfate (CuSO4·5H2O)
*PC-I: Ice *PC-N: None *PC-O: Other

SR 1st Review: BM CS 2nd Review: NB

ANALYSIS REQUESTED

Enter 'X' in box below to indicate request and use appropriate preservation code listed to the left

CLIENT SAMPLE ID	Lab Use Only	DATE SAMPLED	TIME (24 hr)	SAMPLE MATRIX	SAMPLE TYPE	Number of Containers (NB 3/25/20)	Dissolved Metals Field Filtered: Y/N Preservative*:	Hexavalent Chromium, Dissolved Field Filtered: Y/N Preservative*:	PC-2 Preservative*: 8260VOA	PC-1 Preservative*: T-Metals	Preservative*: D-Metals NB	PC-N Preservative*: Chloride/Sulfate/Nitrate, PH, TDS NB	PC-N Preservative*: Alk/~~Cotoh/B.carb~~ NB	PC-1 Preservative*: Hardness	PC-3 Preservative*: NH_3/COD	Preservative*: TOC NB	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Cooler(s) Temperature on Receipt: 4
RHCD06	001	3/24	1303	GW	Grab	13			X	X	X	X	X	X	X	X								
RHCD05	002	↓	1404	↓	↓	13			X	X	X	X	X	X	X	X								
RHCD04	003	↓	1430	↓	↓	13			X	X	X	X	X	X	X	X								
WHCD03	004	↓	1459	↓	↓	13			X	X	X	X	X	X	X	X								
T-Blank PP 3.25.20	005																							

Ice present on receipt: X Yes or ___ No

CHAIN OF CUSTODY				
Relinquished by: [signature]	Date/Time: 3/24/20 16:00	Received by:	Date/Time:	
Relinquished by:	Date/Time:	Received at lab by: Don Paul	Date/Time: 3.25.20 10:34	
Sampler Name: AS		Comments:		

Sample Matrix:	GW Ground Water	ST Storm Water	SW Surface Water	PW Potable Water	WW Wastewater	SO Soil	SL Sludge	C Coal
Sample Type:	G Grab	C Composite	D Distribution/DW	R Raw/DW	S Special/DW	O Other	nHZ Not Hazardous / HZ Hazardous	

Please return completed form and samples to **Geochemical Testing • 2005 N Center Ave • Somerset, PA • 15501** • 814-443-1671 • (Fax: 814-445-6729)

SAMPLES MUST BE PRESERVED ON ICE.

Form F-5002, 05.19
*** Lab Work Order # 62003D21

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Pennsylvania Chain of Custody (COC)

Shuttle/Cooler ID#

Billing Client

Company	Tetra Tech
Mailing Address	750 Arnold Rd
City, State, Zip	Annapolis MD
Name	Andrea Smith
Telephone No.	443-610-3090
E-mail Address	
Landfill Site	
State Sampled	MD
PWS Number	
Date Results Required	

Special Instructions/Project ID's/Analyte List: 7215A

*PC-1: Nitric acid (HNO_3)
*PC-2: Hydrochloric acid (HCL)
*PC-3: Sulfuric acid (H_2SO_4)
*PC-4: Sodium Hydroxide (NaOH)
*PC-5: Sodium Thiosulfate ($Na_2S_2O_3$)
*PC-6: Ascorbic acid ($C_6H_8O_6$)
*PC-7: Zinc acetate ($C_4H_6O_4Zn$)
*PC-8: Ammonium chloride (NH_4Cl)
*PC-9: Copper Sulfate ($CuSO_4 \cdot 5H_2O$)
*PC-I: Ice *PC-N: None *PC-O: Other

SR 1st Review: Bm CS 2nd Review: NB

ANALYSIS REQUESTED

Enter 'X' in box below to indicate request and use appropriate preservation code listed to the left

CLIENT SAMPLE ID	Lab Use Only	DATE SAMPLED	TIME (24 hr)	SAMPLE MATRIX	SAMPLE TYPE	Number of Containers	Field Filtered: Y/N, Preservative	Field Filtered: Y/N, Preservative	Field Filtered: Y/N, Preservative	PC-2 Preservative: 8260 VOCs	PC-1 Preservative: T-Metals	Preservative: Total Cyanide NB	PC-2 Preservative: Nitrate/Nitrite, Total Phenols NB	PC-2 Preservative: Alk/Acidity/TDS NB	PC-1 Preservative: Hardness	PC-3 Preservative: NH3/COD NB	Preservative: TOC NB	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative
FB1=RHCU001	001	3/24	1535	GW	Grab water	13				X	X	X	X	X	X	X	X								
RHC DD03	—	3/24	1150	GW	water	13				X	X	X	X	X	X	X	X								
RHC DD02	—	3/24	1215	GW	water	13				X	X	X	X	X	X	X	X								
FB2=WHC002	002	3/24	1530	GW	water	13				X	X	X	X	X	X	X	X								
T-Blank DP 3252	—																								

Preservation Reagent Achieved on Receipt: Yes or X No

Preservation Reagent Achieved on Receipt: Yes or X No

CHAIN OF CUSTODY				
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received at lab by:	Date/Time: 3/25/20 10:48
Sampler Name:		Comments:	

Sample Matrix: GW Ground Water | ST Storm Water | SW Surface Water | PW Potable Water | WW Wastewater | SO Soil | SL Sludge | C Coal

Sample Type: G Grab | C Composite | D Distribution/DW | R Raw/DW | S Special/DW | O Other | nHZ Not Hazardous / HZ Hazardous

Please return completed form and samples to Geochemical Testing • 2005 N Center Ave • Somerset, PA • 15501 • 814-443-1671 • (Fax: 814-445-6729)

Form F-5002, 05.19
*** Lab Work Order # G2003D24

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Pennsylvania Chain of Custody (COC)

Shuttle/Cooler ID#

Billing Client

Company: Tetra Tech	Name: Andrew Smith		E-mail Address:
Mailing Address: 980 Awald Rd	Telephone No.: 443-610-3290		Landfill Site:
City, State, Zip: Annapolis MD	State Sampled: MD	PWS Number:	Date Results Required:

Special Instructions/Project ID's/Analyte List: 7215A

*PC-1: Nitric acid (HNO_3)
*PC-2: Hydrochloric acid (HCL)
*PC-3: Sulfuric acid (H_2SO_4)
*PC-4: Sodium Hydroxide (NaOH)
*PC-5: Sodium Thiosulfate ($Na_2S_2O_3$)
*PC-6: Ascorbic acid ($C_6H_8O_6$)
*PC-7: Zinc acetate ($C_4H_6O_4Zn$)
*PC-8: Ammonium chloride (NH_4CL)
*PC9: Copper Sulfate (CuSO4·5H2O)
*PC-I: Ice *PC-N: None *PC-O: Other

SR 1st Review: BN CS 2nd Review: NB

ANALYSIS REQUESTED

Enter 'X' in box below to indicate request and use appropriate preservation code listed to the left

CLIENT SAMPLE ID	Lab Use Only	DATE SAMPLED	TIME (24 hr)	SAMPLE MATRIX	SAMPLE TYPE	Number of Containers (NB 3/25/20)	Dissolved Metals Field Filtered: Y/N Preservative*:	Hexavalent Chromium, Dissolved Field Filtered: Y/N Preservative*:	PC-2 Preservative*: 8260VOA	PC-1 Preservative*: T-Metals	Preservative*: D-Metals NB	PC-N Preservative*: Chloride/Sulfate/Nitrate PH, TDS NB	PC-N Preservative*: Alk/Carb/Bicarb NB	PC-1 Preservative*: Hardness	PC-3 Preservative*: NH3/COD	Preservative*: TOC NB	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Cooler(s) Temperature on Receipt 4
~~FB1-RHCU01~~ DD		~~3/24~~ DD	~~1200~~ 1555	GW	Grab water	13			X	X	X	X	X	X	X	X								
RHC D08	001	3/24	1150	GW	water	13			X	X	X	X	X	X	X	X								
RHC D07	002	3/24	1215	GW	water	13			X	X	X	X	X	X	X	X								
~~FB2=WHCU02~~ DD		~~3/24~~	~~15:30~~	GW	water	13			X	X	X	X	X	X	X	X								
T-Blank DD 3/25/20	003																							

Ice present on receipt: X Yes or ___ No

CHAIN OF CUSTODY				
Relinquished by: [signature]	Date/Time: 3/24/20 1600	Received by:	Date/Time:	
Relinquished by:	Date/Time:	Received at lab by: Jon Paul	Date/Time: 3/25/20 10:48	
Sampler Name: AS		Comments:		

Sample Matrix:	GW Ground Water	ST Storm Water	SW Surface Water	PW Potable Water	WW Wastewater	SO Soil	SL Sludge	C Coal
Sample Type:	G Grab	C Composite	D Distribution/DW	R Raw/DW	S Special/DW	O Other	nHZ Not Hazardous / HZ Hazardous	

Please return completed form and samples to **Geochemical Testing • 2005 N Center Ave • Somerset, PA • 15501** • 814-443-1671 • (Fax: 814-445-6729)

SAMPLES MUST BE PRESERVED ON ICE.

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge ~~RHC D06~~ L.F.

Site No.: 898 Sample Point: RHCD06 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 62003D16

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1238	25	108	330	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Device: Y or N — 0.45 µ or ____ µ (circle or fill in)

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): ____ (ft/msl) — Depth to Water (DTW) (from TOC): 2227 (ft) — Groundwater Elevation (site datum, from TOC): ____ (ft/msl)

Total Well Depth (from TOC): 3883 (ft) — Stick Up (from ground elevation): 19 (ft) — Casing ID: 4 (in) — Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1240	4 1st	675 1st	.263	140	117	11	290	226
1247	1 2nd	630 2nd	.296	157	150	96	140	226
1254	2 3rd	637 3rd	.305	159	236	95	120	226
1300	3 4th	643 4th	.298	160	229	95	80	226
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
32420	632	.294	161	193	97	200	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear — Odor: Odorless — Color: Colorless — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 — Outlook: 50s sunny — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

(38.83 - 22.27) · 0.653 = 10.81 x 3 = 32.44 gal

Sampled @ 13:03

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3,24,20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample. YELLOW - Returned to Client. PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.

Site No.: 898 Sample Point: RHCD05 (Sample ID)

This Waste Management Field Information Form is Required. This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2003216

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs.min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
3/24/20	1355	09	25	100	4.0

Note: For Passive Sampling, replace "Water Vol In Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/ Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC): 3909 (ft/msl)

Depth to Water (DTW) (from TOC): 2083 (ft)

Groundwater Elevation (site datum, from TOC): ____ (ft/msl)

Total Well Depth (from TOC): 3600 (ft)

Stick Up (from ground elevation): 300 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1355	4	5.60	1.131	15.1	52.0	1.27	178.0	
1358	1	5.33	1.170	16.0	12.7	1.05	208.0	
1400	2	5.17	1.180	16.2	0.0	1.01	241.0	
1402	3	5.10	1.183	16.2	0.0	9.99	251.0	
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 2%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
3/24/20	5.00	1.184	16.3	0.0	9.8	278.0	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: Odorless Color: colorless Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50s sunny Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

36.00 − 20.83 = 15.17 · 0.163 = 2.47 · 3 = 7.42

Sampled @ 1404

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	Andrew S. Smith	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: RHCD04 (Sample ID)

This Waste Management Field Information Form Is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2008D16

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1420	10	19	100	50

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N (circled: N)

Filter Device: Y or N (circled: N) 0.45 µ or ____ µ (circle or fill in)

Purging Device: A — A - Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): 3604 (ft/msl)

Depth to Water (DTW) (from TOC): 1832 (ft)

Groundwater Elevation (site datum, from TOC): 1963 (ft/msl)

Total Well Depth (from TOC): 3000 (ft)

Stick Up (from ground elevation): 300 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1422	4	1st 479	1st .083	146	2280	114	321	
1426	1	2nd 464	2nd .080	150	1910	105	341	
1428	2	3rd 463	3rd .080	151	904	101	335	
1430	3	4th 463	4th .081	149	3830	101	344	
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
32420	461	.079	152	5040	98	3600	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit Site.*

FIELD COMMENTS

Sample Appearance: Cloudy — Odor: odorless — Color: colorles — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 — Outlook: 50's sunny — Precipitation: Y or N (circled: N)

Specific Comments (including purge/well volume calculations if required):

30.00 − 18.32 = 11.68 · 0.163 = 1.90 · 3 = 5.71

Sampled @ 14:30

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample. YELLOW - Returned to Client. PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: WHCD03 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2003D16

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1445	14	16	100	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w. Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): 3045 (ft/msl)

Depth to Water (DTW) (from TOC): 1009 (ft)

Groundwater Elevation (site datum, from TOC): 2044 (ft/msl)

Total Well Depth (from TOC): 2010 (ft)

Stick Up (from ground elevation): 300 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1448	4	1st 485	1st .038	132	2200	114	326	
1450	1	2nd 482	2nd .037	132	717	111	333	
1452	2	3rd 481	3rd .038	134	318	108	329	
1454	3	4th 481	4th .039	135	221	106	335	
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
32420	484	.041	137	113	103	343	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear — Odor: Odorless — Color: colorless — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 — Outlook: 50s sunny — Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

20.10 − 10.09 = 10.01 · 0.163 = 1.63 · 3 = 4.89

Sampled @ 14:59

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample. YELLOW - Returned to Client. PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: RHCU01 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2003D21

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
32420	1544	11	15	80	50

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing Flow Cell and Tubing Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) ____ (ft/msl) — Depth to Water (DTW) (from TOC) 2344 (ft) — Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) 3250 (ft) — Stick Up (from ground elevation) 300 (ft) — Casing ID 2 (in) — Casing Material PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1546	4	1st 582	1st 1.247	139	114	118	2840	
1548	1	2nd 594	2nd 1.248	138	8660	113	2750	
1549	2	3rd 601	3rd 1.248	138	7110	109	2720	
1551	3	4th 603	4th 1.249	139	3620	107	2770	
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
32420	600	.249	139	3670	107	2820	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear — Odor: odorless — Color: colorless — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 — Outlook: 50s Sunny — Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

32.50 - 23.44 = 9.06 • 0.163 = 1.48 • 3 = 4.43

Sampled @ 15:55

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.
Site No.: 0898 Sample Point: WHCW02 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2003D71

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
3/24/20	1514	116	12	100	8

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)
Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)
Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle
Sampling Device: A
X-Other:
Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other
Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): 4312 (ft/msl)
Depth to Water (DTW) (from TOC): 20.33 (ft)
Groundwater Elevation (site datum, from TOC): 2356 (ft/msl)
Total Well Depth (from TOC): 27.39 (ft)
Stick Up (from ground elevation): 3.00 (ft)
Casing ID: 2 (in)
Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1515	1	4.67	1.329	14.3	100.0	10.7	331.0	
1517	1	4.62	1.236	14.5	127.5	10.3	352.0	
1520	2	4.66	1.236	14.3	63.1	10.0	342.0	
1522	3	4.65	1.233	14.5	29.0	9.9	362.0	
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
3/24/20	4.63	1.234	14.6	35.60	9.9	367.0	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

FIELD COMMENTS

Sample Appearance: Cloudy
Odor: Odorless
Color: tan/murky
Other:
Weather Conditions (required daily, or as conditions change):
Direction/Speed: NW/8
Outlook: 50's sunny
Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

27.39 − 20.33 = 7.06 · 0.163 = 1.15 × 3 = 3.45

Sampled @ 15:30

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: RHCD08 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory)

Laboratory Use Only/Lab ID: G2003D24

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs.min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLS PURGED
3 2 4 2 0					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device ____ A- Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Sampling Device ____

X-Other: ____

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other ____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
3 2 4 2 0	7 3 4	0.161	16.7	0.3	1.26	179.0	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit Site.*

Sample Appearance: Clear Odor: odorless Color: colorless Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 50s sunny Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required): ____

FIELD COMMENTS

Surface sample taken @ 11:50

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	Andrew J. Smith	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge L.F.

Site No.: 0898 Sample Point: RHCU07 (Sample ID)

This Waste Management Field Information Form is Required. This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2003D24

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLS PURGED
3					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated. Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by Site/Permit/State. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. (If more fields above are needed, use separate sheet or form.)

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
3 2 4 2 3	6 9 2	1 4 9	1 0 8	0 3	1 1 2	1 5 3 0	

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State Permit/Site.

Sample Appearance: Clear Odor: odorless Color: Colorless Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW/8 Outlook: 80s Sunny Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Surface sample taken @ 12:15

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/24/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

HUNTING RIDGE C&D DEBRIS LANDFILL
Hurlock, Maryland

GAS VENT SYSTEM CHECKS

Date: 3/24/~~18~~ 2020
Personnel: Andrew Smith
Instrument: Landtec GEM 2000, manometer

Weather: 50° Sunny
Barametric Pressure: 30.26" Hg

INTERIOR GAS VENT MONITORING									
Location ID	Time	Methane (%)	Pressure (in. H_2O)	Temp (°F)	Spark Present	Flame Present	Relight Successful	Valve Position	Comments
GW-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
GW-3	1649	20.2	-0.15	N/A	N/A	N/A	N/A	CLOSED	
GW-4	1655	N/A	N/A	100	N/A	N/A	N/A	N/A	
GW-5	1658	0.0	-0.30	N/A	N/A	N/A	N/A	N/A	
GW-7	1714	0.0	-0.31	100	N/A	N/A	N/A	CLOSED	
GW-10	1723	0.0	-0.22	N/A	N/A	N/A	N/A	N/A	
GW-11	1628	0.0	-0.00	N/A	N/A	N/A	N/A	CLOSED	
GW-12	1635	0.0	-0.35	N/A	N/A	N/A	N/A	CLOSED	
GW-13	1638	~~[illegible]~~ 100	-0.72	N/A	N/A	N/A	N/A	OPEN	
GW-14	1644	0.0	-0.13	N/A	No	No	N/A	~~50%~~	Open
GW-16	1653	+0.15	-0.20	115 ~~[illegible]~~	No	No	N/A	OPEN	
GW-17	1700	0.0	-0.20	N/A	No	No	N/A	~~OPEN~~	Closed
GW-18	1712	25.0	-0.27	N/A	No	No	N/A	CLOSED	
GW-19	1717	+0.03	-0.20	130	No	No	N/A	OPEN	
GW-20	1720	0.0	-0.23	N/A	N/A	N/A	N/A	CLOSED	
GW-21	1633	+0.27	-0.17	N/A	N/A	N/A	N/A	CLOSED	
GW-22	1641	0.0	-0.14	N/A	No	No	N/A	OPEN	
GW-25	1710	+0.03	-0.25	N/A	N/A	N/A	N/A	N/A	
GW-26	1704	0.0	-0.22	99				CLOSED	

EXTERIOR GAS VENT MONITORING									
Location ID	Time	Methane (%)	Pressure (in. H_2O)	Temp (°F)	Spark Present	Flame Present	Relight Successful	Valve Position	Comments
GV-A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	capped
GV-E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	capped
GV-I	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	capped
GV-M	1728	0.0	0.00	N/A	No	No	N/A	Open	
GV-P	1725	0.0	-0.02	N/A	No	No	N/A	NO VALVE	
GV-S	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	capped

Additional Comment

HUNTING RIDGE C&D DEBRIS LANDFILL
Hurlock, Maryland

PERIMETER GAS MONITORING
1 st Quarter 2020

Date: 3/24/~~2019~~ 2020
Personnel: AS
Instrument: Landtec GEM 2000

Weather: 50° Sunny
Barametric Pressure: 30.26 "Hg

PERIMETER GAS PROBE MONITORING						
Location ID	Time	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Pressure (in. H_2O)	Comments
GP-1	11:15	0.0	0.7	20.5	0.00	
GP-2	10:48	0.0	0.4	20.5	0.00	
GP-3	10:30	0.0	0.6	20.5	0.02	
GP-4	10:14	0.0	2.3	20.5	0.01	
GP-5	9:58	0.0	0.9	20.4	0.00	
GP-6	11:33	0.0	1.4	20.3	0.02	

9:50 = Shed = 0.0 0.2 20.6 N/A x4

PERIMETER BAR HOLE MONITORING						
Location ID	Time	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Pressure (in. H_2O)	Comments
P-1	9:25	0.0	0.0	20.6	N/A	
P-2	9:30	0.0	0.0	20.6	N/A	
P-3	9:33	0.0	0.2	20.6	N/A	
P-4	9:43	0.0	0.0	20.5	N/A	
P-5	9:46	0.0	0.0	20.4	N/A	
P-6	9:57	0.0	0.1	20.3	N/A	
P-7	10:00	0.0	0.0	20.5	N/A	
P-8	10:04	0.0	0.1	20.5	N/A	
P-9	10:08	0.0	0.2	20.5	N/A	
P-10	10:19	0.0	0.1	20.6	N/A	
P-11	10:23	0.0	0.0	20.3	N/A	
P-12	10:26	0.0	0.0	20.3	N/A	
P-13	10:32	0.0	0.0	20.3	N/A	
P-14	10:36	0.0	0.2	20.5	N/A	
P-15	10:39	0.0	0.1	20.5	N/A	
P-16	10:43	0.0	0.0	20.2	N/A	
P-17	10:53	0.0	0.1	20.2	N/A	
P-18	10:57	0.0	0.0	20.0	N/A	
P-19	11:10	0.0	0.0	20.0	N/A	
P-20	11:19	0.0	0.0	20.1	N/A	
P-21	11:24	0.0	0.0	20.5	N/A	
P-22	11:27	0.0	0.2	20.5	N/A	
P-23	11:37	0.0	0.1	20.6	N/A	

HUNTING RIDGE C&D LANDFILL
Hurlock, Maryland

POST-CLOSURE SITE INSPECTION
1st Quarter 2020

Date: 3/24/~~25~~2020
Personnel: AS
Weather: 60° Sunny

Landfill Type and Size: C&D: 44 acres (28 filled)
Landfill Close Date: 1/16/1998

POST-CLOSURE SITE INSPECTION					
	Yes	No	Minor Damage	Major Damage	Comments
Site Access and Security					
Is the site access road in good condition?	X				
Is the perimeter fencing in good condition?	X				
Are perimeter warning signs present?	X				
Is the landfill mound access road in good condition?	X				
Is there evidence of damage due to unauthorized access?		X			
Cap and Vegetation					
Is the vegetative layer in good condition?	X				
Are all side slopes in good condition?	X				
Is there evidence of erosion?		X			
Are there depressions in the cap's surface?		X			
Is there evidence of damage due to burrowing animals?		X			
Is there evidence of gas or leachate break-outs?		X			
Drainage					
Are appropriate runoff controls in place?	X				
Is there blockage to the slope drains?		X			
Is there blockage to the perimeter drainage swales?		X			
Are all sedimentation ponds in good condition?	X				
Are all outlet structures intact and free of obstructions?	X				
Are all groundwater monitoring wells accessable?	X				
Are all groundwater monitoring wells secure?	X				
Are all groundwater monitoring wells in good condition?	X				
Gas System					
Are all gas probes accessable?	X				
All all gas probes secure?	X				
Are all gas probes in good condition?	X				
Are all gas vent flares in good condition?	X				
Were any landfill odors detected at the property line?		X			

GEOCHEMICAL TESTING
Environmental and Energy Analysis

Sample Receipt Log

Date: 03/25/2020 **Time:** 10:34 **Initials:** DWP **Client:** WM OF MARYLAND INC. / HRLF **Workorder:** G2003D16

Thermometer Certification Number: CP 336484

Shuttle #: na CusSeal: NA ICE: Yes Temp: 4 °C

Site	RHCD06	RHCD05	RHCD04	WHCD03	Trip Blank
GT ID #	001	002	003	004	005
Number of Bottles	13	13	13	13	3
Number of Unfixed Bottles	5	5	5	5	1
Number of Micro Bottles	0	0	0	0	0
Num of Low Level Hg Bottles	0	0	0	0	0
Num of HAA5 Bottles	0	0	0	0	0
Num of TCLP / ASTM / Cups	0	0	0	0	0
Num of Oil and Grease Bottles	0	0	0	0	0
Num of Unfixed DW Bottles	0	0	0	0	0
Num of Sub Bottles	0	0	0	0	0
Shuttle #	na	na	na	na	na
Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Aqueous
pH < 2					
T-metals + Hg & T-hardness	< 2	< 2	< 2	< 2	
Dissolved Metals + Hg					
NH3 / COD / NO3+NO2 / TKN / P_tot	< 2	< 2	< 2	< 2	
# Phenolics pH < 2	0	0	0	0	0
# Phenolics pH > 2	0	0	0	0	0
TOC pH (Vial 1)					
TOC pH (Vial 2)					
TOC Amber (Vial 1)					
TOC Amber (Vial 2)					
Ferrous Iron					
# EDB / DBCP (NO Air) Pass	3	3	3	3	1
# EDB / DBCP (NO Air) Fail	0	0	0	0	0
TOX Amber Bottle					
# VOC / THM / BTEX (NO Air) Pass	3	3	3	3	1
# VOC / THM / BTEX (NO Air) Fail	0	0	0	0	0
Sulfide pH					
# Cyanide pH > 12	0	0	0	0	0
# Cyanide pH < 12	0	0	0	0	0
# Cyanide Free Cl OK	0	0	0	0	0
# Cyanide Free Cl Pink	0	0	0	0	0
# Amber Free Cl OK	0	0	0	0	0
# Amber Free Cl Pink	0	0	0	0	0
# Amber Bottle Yes	0	0	0	0	0
# Amber Bottle No	0	0	0	0	0
TOX (only if dechlorinated)					
# Cyanide Sulfide Test OK	0	0	0	0	0
# Cyanide Sulfide Test Black	0	0	0	0	0
Rad Test (mR/hr)					

GEOCHEMICAL TESTING
Environmental and Energy Analysis

Sample Receipt Log

Date: 03/25/2020 **Time:** 10:48 **Initials:** DWP **Client:** WM OF MARYLAND INC. / HRLF **Workorder:** G2003D21

Thermometer Certification Number: CP 336484

Shuttle #: na CusSeal: NA ICE: Yes Temp: 4 °C

Site	RHCU01	WHCU02
GT ID #	001	002
Number of Bottles	13	13
Number of Unfixed Bottles	5	5
Number of Micro Bottles	0	0
Num of Low Level Hg Bottles	0	0
Num of HAA5 Bottles	0	0
Num of TCLP / ASTM / Cups	0	0
Num of Oil and Grease Bottles	0	0
Num of Unfixed DW Bottles	0	0
Num of Sub Bottles	0	0
Shuttle #	na	na
Sample Type	Groundwater	Groundwater
pH < 2		
T-metals + Hg & T-hardness	< 2	< 2
Dissolved Metals + Hg		
NH3 / COD / NO3+NO2 / TKN / P_tot	< 2	< 2
# Phenolics pH < 2	0	0
# Phenolics pH > 2	0	0
TOC pH (Vial 1)		
TOC pH (Vial 2)		
TOC Amber (Vial 1)		
TOC Amber (Vial 2)		
Ferrous Iron		
# EDB / DBCP (NO Air) Pass	3	3
# EDB / DBCP (NO Air) Fail	0	0
TOX Amber Bottle		
# VOC / THM / BTEX (NO Air) Pass	3	3
# VOC / THM / BTEX (NO Air) Fail	0	0
Sulfide pH		
# Cyanide pH > 12	0	0
# Cyanide pH < 12	0	0
# Cyanide Free Cl OK	0	0
# Cyanide Free Cl Pink	0	0
# Amber Free Cl OK	0	0
# Amber Free Cl Pink	0	0
# Amber Bottle Yes	0	0
# Amber Bottle No	0	0
TOX (only if dechlorinated)		
# Cyanide Sulfide Test OK	0	0
# Cyanide Sulfide Test Black	0	0
Rad Test (mR/hr)		

GEOCHEMICAL TESTING
Environmental and Energy Analysis

Sample Receipt Log

Date: 03/25/2020 **Time:** 11:01 **Initials:** DWP **Client:** WM OF MARYLAND INC. / HRLF **Workorder:** G2003D24

Thermometer Certification Number: CP 336484

Shuttle #: na CusSeal: NA ICE: Yes Temp: 4 °C

Site	RHCD08	RHCD07	Trip Blank
GT ID #	001	002	003
Number of Bottles	13	13	3
Number of Unfixed Bottles	5	5	1
Number of Micro Bottles	0	0	0
Num of Low Level Hg Bottles	0	0	0
Num of HAA5 Bottles	0	0	0
Num of TCLP / ASTM / Cups	0	0	0
Num of Oil and Grease Bottles	0	0	0
Num of Unfixed DW Bottles	0	0	0
Num of Sub Bottles	0	0	0
Shuttle #	na	na	na
Sample Type	Aqueous	Aqueous	Aqueous
pH < 2			
T-metals + Hg & T-hardness	< 2	< 2	
Dissolved Metals + Hg			
NH3 / COD / NO3+NO2 / TKN / P_tot	< 2	< 2	
# Phenolics pH < 2	0	0	0
# Phenolics pH > 2	0	0	0
TOC pH (Vial 1)			
TOC pH (Vial 2)			
TOC Amber (Vial 1)			
TOC Amber (Vial 2)			
Ferrous Iron			
# EDB / DBCP (NO Air) Pass	3	3	1
# EDB / DBCP (NO Air) Fail	0	0	0
TOX Amber Bottle			
# VOC / THM / BTEX (NO Air) Pass	3	3	1
# VOC / THM / BTEX (NO Air) Fail	0	0	0
Sulfide pH			
# Cyanide pH > 12	0	0	0
# Cyanide pH < 12	0	0	0
# Cyanide Free Cl OK	0	0	0
# Cyanide Free Cl Pink	0	0	0
# Amber Free Cl OK	0	0	0
# Amber Free Cl Pink	0	0	0
# Amber Bottle Yes	0	0	0
# Amber Bottle No	0	0	0
TOX (only if dechlorinated)			
# Cyanide Sulfide Test OK	0	0	0
# Cyanide Sulfide Test Black	0	0	0
Rad Test (mR/hr)			

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset, PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

Monday, September 28, 2020

David Kaasa
WM OF MARYLAND INC. / HRLF
100 BRANDYWIND BLVD
THIRD FLOOR
NEWTOWN, PA 18940

RE: Hunting Ridge LF 721SA Order No.: G2009674

Dear David Kaasa:

Geochemical Testing received 4 sample(s) on 9/10/2020 for the analyses presented in the following report.

There were no problems with sample receipt protocols and analyses met the TNI/NELAC, EPA, and laboratory specifications except where noted in the Case Narrative or Laboratory Results.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Timothy W. Bergstresser
Director of Technical Services

Nate R. Bergstresser
Client Support

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306PA DEP

Geochemical Testing

Date: *28-Sep-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 721SA
Lab Order: G2009674

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

Submitted COC documentation incomplete with the following deficiencies: corrections made without initials/date and missing Preservatives.

Legend:

H - Method Hold Time exceeded and is not compliant with 40CFR136 Table II.
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.
B - Analyte detected in the associated Method Blank
Q1 - See case narrative ND - Not Detected
MCL - Contaminant Limit J - Indicates an estimated value.
Q - Qualifier QL -Quantitation Limit DF - Dilution Factor

S - Surrogate Recovery outside accepted recovery limits
T - Sample received above required temperature and is not compliant with 40CFR136 Table II.
T1 - Sample received above required temperature
MDA - Minimum Detectable Activity.
** - Value exceeds Action Limit
TICs - Tentatively Identified Compounds.
E - Value above quantitation range

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD07
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:31:00 PM
Lab ID:	G2009674-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	6.76		0		S.U.			09/09/20 12:31 PM
Specific Conductance (Field)	113		0		µmhos/cm			09/09/20 12:31 PM
Temperature (Field)	23.3		0		deg C			09/09/20 12:31 PM
Turbidity (Field)	9.8		0		NTU			09/09/20 12:31 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	164		2.0	5	µmhos/cm	1		09/14/20 5:58 PM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	7.52	H	0		S.U.	1		09/14/20 5:58 PM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	110		10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	39		5.0	10	mg/L CaCO3	1		09/14/20 5:58 PM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	11		5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	17.4		0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 5:40 PM
Sulfate	3.8		0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 5:40 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.13		0.040	0.10	mg/L as N	1		09/22/20 10:32 AM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	1.79		0.100	0.25	mg/L as N	5	09/14/20 3:40 PM	09/15/20 1:43 PM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 180.1**	**EPA 180.1**
Turbidity	1.4		0.05	0.1	NTU	1	09/10/20 4:50 PM	09/10/20 5:32 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:46 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.361		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Calcium	10.6		0.050	0.10	mg/L	1	09/16/20 8:00 AM	09/17/20 6:38 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD07
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:31:00 PM
Lab ID:	G2009674-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.55		0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Magnesium	6.38		0.050	0.10	mg/L	1	09/16/20 8:00 AM	09/17/20 6:38 AM
Manganese	0.430		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Potassium	4.9		0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Sodium	5.4		0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Zinc	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:33 AM
Hardness (SM 2340B)	52.8		0.50	1.0	mg/L	1	09/16/20 8:00 AM	09/17/20 6:38 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 8:49 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:22 PM
Lead	0.20	U	0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:22 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/15/20 11:58 PM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/15/20 11:58 PM
Surr: 1,1,2,2-Tetrachloroethane	94.4		0	60-140	%REC	1	09/14/20 10:06 AM	09/15/20 11:58 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 10:40 AM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 10:40 AM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 10:40 AM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 10:40 AM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Bromomethane	0.50	UC1	0.50	1.0	µg/L	1		09/11/20 10:40 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD07
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:31:00 PM
Lab ID:	G2009674-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 10:40 AM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 10:40 AM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 10:40 AM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 10:40 AM
Surr: 1,2-Dichloroethane-d4	94.5		0	70-130	%REC	1		09/11/20 10:40 AM
Surr: 4-Bromofluorobenzene	94.3		0	70-130	%REC	1		09/11/20 10:40 AM
Surr: Dibromofluoromethane	88.1		0	70-130	%REC	1		09/11/20 10:40 AM
Surr: Toluene-d8	99.5		0	70-130	%REC	1		09/11/20 10:40 AM

NOTES:

C1 - CCV recovery above the acceptance limits. Results may be biased high.

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD08
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:40:00 PM
Lab ID:	G2009674-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	6.88		0		S.U.			09/09/20 12:40 PM
Specific Conductance (Field)	115		0		µmhos/cm			09/09/20 12:40 PM
Temperature (Field)	23.1		0		deg C			09/09/20 12:40 PM
Turbidity (Field)	3.2		0		NTU			09/09/20 12:40 PM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	166		2.0	5	µmhos/cm	1		09/14/20 6:02 PM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	7.57	H	0		S.U.	1		09/14/20 6:02 PM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	106		10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	37		5.0	10	mg/L CaCO3	1		09/14/20 6:02 PM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	10		5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	17.9		0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 6:37 PM
Sulfate	4.5		0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 6:37 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.13		0.040	0.10	mg/L as N	1		09/22/20 10:34 AM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	1.91		0.100	0.25	mg/L as N	5	09/14/20 3:40 PM	09/15/20 1:44 PM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 180.1**	**EPA 180.1**
Turbidity	1.8		0.05	0.1	NTU	1	09/10/20 4:50 PM	09/10/20 5:32 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:48 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.435		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Calcium	12.3		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD08
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:40:00 PM
Lab ID:	G2009674-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	4.04		0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Magnesium	7.08		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Manganese	0.926		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Potassium	5.0		0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Sodium	5.5		0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Zinc	0.012		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
Hardness (SM 2340B)	59.9		0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:36 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 8:51 AM
Cadmium	0.3		0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:25 PM
Lead	2.6		0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:25 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 12:15 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 12:15 AM
Surr: 1,1,2,2-Tetrachloroethane	94.6		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 12:15 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:06 AM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:06 AM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 11:06 AM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 11:06 AM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Bromomethane	0.50	UC1	0.50	1.0	µg/L	1		09/11/20 11:06 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD08
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:40:00 PM
Lab ID:	G2009674-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:06 AM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 11:06 AM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:06 AM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 11:06 AM
Surr: 1,2-Dichloroethane-d4	94.5		0	70-130	%REC	1		09/11/20 11:06 AM
Surr: 4-Bromofluorobenzene	93.5		0	70-130	%REC	1		09/11/20 11:06 AM
Surr: Dibromofluoromethane	90.1		0	70-130	%REC	1		09/11/20 11:06 AM
Surr: Toluene-d8	99.1		0	70-130	%REC	1		09/11/20 11:06 AM

NOTES:

C1 - CCV recovery above the acceptance limits. Results may be biased high.

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	FB 2
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:00:00 PM
Lab ID:	G2009674-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
PHYSICAL TESTS			Analyst: **LRR**					**EPA 120.1**
Specific Conductance	6		2.0	5	µmhos/cm	1		09/14/20 6:06 PM
PH BY SM 4500 H+B			Analyst: **LRR**					**SM 4500-H+ B**
Lab pH	5.82	H	0		S.U.	1		09/14/20 6:06 PM
INORGANIC NON-METALS			Analyst: **GMG**				**SM 2540C**	**SM 2540 C**
Total dissolved solids	10	U	10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst: **LRR**					**ASTM D 1067-11**
Alkalinity to pH 4.5	6	J	5.0	10	mg/L CaCO3	1		09/14/20 6:06 PM
INDICATOR ORGANIC PARAMETERS			Analyst: **AVH**				**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst: **MBG**				**EPA 300.0**	**EPA 300.0**
Chloride	0.20	U	0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 6:55 PM
Sulfate	0.50	U	0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 6:55 PM
INORGANIC NON-METALS			Analyst: **MHF**					**EPA 350.1**
Ammonia Nitrogen	0.05	J	0.040	0.10	mg/L as N	1		09/22/20 10:36 AM
INORGANIC NON-METALS			Analyst: **AMV**				**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	0.020	U	0.020	0.05	mg/L as N	1	09/14/20 3:40 PM	09/15/20 1:45 PM
INORGANIC NON-METALS			Analyst: **AMV**				**EPA 180.1**	**EPA 180.1**
Turbidity	0.1		0.05	0.1	NTU	1	09/10/20 4:50 PM	09/10/20 5:32 PM
INORGANIC METALS			Analyst: **LXM**				**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:50 AM
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Barium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Calcium	0.09	J	0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Iron	0.020	U	0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Magnesium	0.050	U	0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Manganese	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Potassium	0.20	U	0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Sodium	0.2	J	0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	FB 2
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:00:00 PM
Lab ID:	G2009674-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Zinc	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
Hardness (SM 2340B)	0.50	U	0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:38 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 8:54 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:27 PM
Lead	0.20	U	0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:27 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 1:09 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 1:09 AM
Surr: 1,1,2,2-Tetrachloroethane	108		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 1:09 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:32 AM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:32 AM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 11:32 AM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 11:32 AM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Bromomethane	0.50	UC1	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	FB 2
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/9/2020 12:00:00 PM
Lab ID:	G2009674-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:32 AM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 11:32 AM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:32 AM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 11:32 AM
Surr: 1,2-Dichloroethane-d4	91.9		0	70-130	%REC	1		09/11/20 11:32 AM
Surr: 4-Bromofluorobenzene	91.5		0	70-130	%REC	1		09/11/20 11:32 AM
Surr: Dibromofluoromethane	88.2		0	70-130	%REC	1		09/11/20 11:32 AM
Surr: Toluene-d8	100		0	70-130	%REC	1		09/11/20 11:32 AM

NOTES:

C1 - CCV recovery above the acceptance limits. Results may be biased high.

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	Trip Blank
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/10/2020 2:50:00 PM
Lab ID:	G2009674-004	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 1:28 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 1:28 AM
Surr: 1,1,2,2-Tetrachloroethane	108		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 1:28 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,2-Dibromo-3-chloropropane	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:57 AM
1,2-Dibromoethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:57 AM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:57 AM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 11:57 AM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 11:57 AM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Bromomethane	0.50	UC1	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 11:57 AM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM

ACCREDITED IN ACCORDANCE WITH nelac

I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	Trip Blank
Lab Order:	G2009674		
Project:	Hunting Ridge LF 721SA	**Collection Date:**	9/10/2020 2:50:00 PM
Lab ID:	G2009674-004	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	9/10/2020 2:51:42 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 11:57 AM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 11:57 AM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 11:57 AM
Surr: 1,2-Dichloroethane-d4	92.0		0	70-130	%REC	1		09/11/20 11:57 AM
Surr: 4-Bromofluorobenzene	94.1		0	70-130	%REC	1		09/11/20 11:57 AM
Surr: Dibromofluoromethane	87.6		0	70-130	%REC	1		09/11/20 11:57 AM
Surr: Toluene-d8	100		0	70-130	%REC	1		09/11/20 11:57 AM

NOTES:

C1 - CCV recovery above the acceptance limits. Results may be biased high.

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I.D. 56-00306 PA DEP

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset, PA 15501

814/443-1671
814/445-6666
FAX: 814/445-6729

Monday, September 28, 2020

David Kaasa
WM OF MARYLAND INC. / HRLF
100 BRANDYWIND BLVD
THIRD FLOOR
NEWTOWN, PA 18940

RE: Hunting Ridge LF 221A Order No.: G2009688

Dear David Kaasa:

Geochemical Testing received 5 sample(s) on 9/10/2020 for the analyses presented in the following report.

There were no problems with sample receipt protocols and analyses met the TNI/NELAC, EPA, and laboratory specifications except where noted in the Case Narrative or Laboratory Results.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Timothy W. Bergstresser
Director of Technical Services

Nate R. Bergstresser
Client Support

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 56-00306PA DEP

Geochemical Testing

Date: *28-Sep-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 221A
Lab Order: G2009688

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

Submitted COC documentation incomplete with the following deficiencies: corrections made without initials/date and missing Preservatives.

Legend:

H - Method Hold Time exceeded and is not compliant with 40CFR136 Table II.
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.
B - Analyte detected in the associated Method Blank
Q1 - See case narrative ND - Not Detected
MCL - Contaminant Limit J - Indicates an estimated value.
Q - Qualifier QL -Quantitation Limit DF - Dilution Factor

S - Surrogate Recovery outside accepted recovery limits
T - Sample received above required temperature and is not compliant with 40CFR136 Table II.
T1 - Sample received above required temperature
MDA - Minimum Detectable Activity.
** - Value exceeds Action Limit
TICs - Tentatively Identified Compounds.
E - Value above quantitation range

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Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCD03
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 9:38:00 AM
Lab ID:	G2009688-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	4.56		0		S.U.			09/09/20 9:38 AM
Specific Conductance (Field)	41		0		µmhos/cm			09/09/20 9:38 AM
Temperature (Field)	16.4		0		deg C			09/09/20 9:38 AM
Turbidity (Field)	0.0		0		NTU			09/09/20 9:38 AM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	56		2.0	5	µmhos/cm	1		09/14/20 3:52 PM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	5.47	H	0		S.U.	1		09/14/20 3:52 PM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	52		10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	11		5.0	10	mg/L CaCO3	1		09/14/20 3:52 PM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	3.2		0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 2:55 PM
Sulfate	3.2		0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 2:55 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.040	U	0.040	0.10	mg/L as N	1		09/22/20 3:46 PM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	1.52		0.020	0.05	mg/L as N	1	09/14/20 4:48 PM	09/15/20 1:51 PM
INORGANIC NON-METALS			Analyst:	**AVH**			**EPA 180.1**	**EPA 180.1**
Turbidity	1.0		0.05	0.1	NTU	1	09/10/20 6:44 PM	09/10/20 6:58 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:51 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.249		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Calcium	1.81		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM

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Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCD03
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 9:38:00 AM
Lab ID:	G2009688-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.04	J	0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Magnesium	2.10		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Manganese	0.222		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Potassium	2.6		0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Sodium	3.0		0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Zinc	0.013		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
Hardness (SM 2340B)	13.2		0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:39 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 8:56 AM
Cadmium	0.2	J	0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:29 PM
Lead	0.20	U	0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:29 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 1:46 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 1:46 AM
Surr: 1,1,2,2-Tetrachloroethane	104		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 1:46 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:01 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:01 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 12:01 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 12:01 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM

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Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	WHCD03
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 9:38:00 AM
Lab ID:	G2009688-001	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:01 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 12:01 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:01 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 12:01 PM
Surr: 1,2-Dichloroethane-d4	90.4		0	70-130	%REC	1		09/11/20 12:01 PM
Surr: 4-Bromofluorobenzene	111		0	70-130	%REC	1		09/11/20 12:01 PM
Surr: Dibromofluoromethane	84.7		0	70-130	%REC	1		09/11/20 12:01 PM
Surr: Toluene-d8	96.0		0	70-130	%REC	1		09/11/20 12:01 PM

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Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD04
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 10:20:00 AM
Lab ID:	G2009688-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	3.92		0		S.U.			09/09/20 10:20 AM
Specific Conductance (Field)	73		0		µmhos/cm			09/09/20 10:20 AM
Temperature (Field)	14.1		0		deg C			09/09/20 10:20 AM
Turbidity (Field)	789.0		0		NTU			09/09/20 10:20 AM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	93		2.0	5	µmhos/cm	1		09/14/20 3:55 PM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	5.27	H	0		S.U.	1		09/14/20 3:55 PM
INORGANIC NON-METALS			Analyst:	**CXM**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	68		10	20	mg/L	1	09/15/20 3:30 PM	09/15/20 4:07 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	6	J	5.0	10	mg/L CaCO3	1		09/14/20 3:55 PM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	3.5		0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 3:13 PM
Sulfate	19.3		0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 3:13 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.040	U	0.040	0.10	mg/L as N	1		09/22/20 11:56 AM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	2.99		0.040	0.10	mg/L as N	2	09/14/20 4:48 PM	09/15/20 1:52 PM
INORGANIC NON-METALS			Analyst:	**AVH**			**EPA 180.1**	**EPA 180.1**
Turbidity	32.0		0.05	0.1	NTU	1	09/10/20 6:44 PM	09/10/20 6:58 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:53 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.174		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Calcium	2.62		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Chromium	0.007	J	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM

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Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD04
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 10:20:00 AM
Lab ID:	G2009688-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	5.68		0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Magnesium	6.12		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Manganese	0.945		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Potassium	3.0		0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Sodium	2.2		0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Zinc	0.018		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
Hardness (SM 2340B)	31.7		0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:41 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 8:58 AM
Cadmium	0.5		0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:32 PM
Lead	2.3		0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:32 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:04 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:04 AM
Surr: 1,1,2,2-Tetrachloroethane	101		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 2:04 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 4:40 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 4:40 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 4:40 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 4:40 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Bromomethane	0.50	UC1	0.50	1.0	µg/L	1		09/11/20 4:40 PM

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Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD04
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 10:20:00 AM
Lab ID:	G2009688-002	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **JAW**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Chloroform	0.6	J	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 4:40 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 4:40 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 4:40 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 4:40 PM
Surr: 1,2-Dichloroethane-d4	90.7		0	70-130	%REC	1		09/11/20 4:40 PM
Surr: 4-Bromofluorobenzene	91.8		0	70-130	%REC	1		09/11/20 4:40 PM
Surr: Dibromofluoromethane	87.0		0	70-130	%REC	1		09/11/20 4:40 PM
Surr: Toluene-d8	99.9		0	70-130	%REC	1		09/11/20 4:40 PM

NOTES:

C1 - CCV recovery above the acceptance limits. Results may be biased high.

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD05
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 10:52:00 AM
Lab ID:	G2009688-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	4.59		0		S.U.			09/09/20 10:52 AM
Specific Conductance (Field)	158		0		µmhos/cm			09/09/20 10:52 AM
Temperature (Field)	14.9		0		deg C			09/09/20 10:52 AM
Turbidity (Field)	0.0		0		NTU			09/09/20 10:52 AM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	222		2.0	5	µmhos/cm	1		09/14/20 3:59 PM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	5.69	H	0		S.U.	1		09/14/20 3:59 PM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	116		10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	8	J	5.0	10	mg/L CaCO3	1		09/14/20 3:59 PM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	24.0		0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 3:30 PM
Sulfate	0.9	J	0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 3:30 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.32		0.040	0.10	mg/L as N	1		09/22/20 11:58 AM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	13.5		0.200	0.50	mg/L as N	10	09/14/20 4:48 PM	09/15/20 1:53 PM
INORGANIC NON-METALS			Analyst:	**AVH**			**EPA 180.1**	**EPA 180.1**
Turbidity	0.4		0.05	0.1	NTU	1	09/10/20 6:44 PM	09/10/20 6:58 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.0001	J	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:55 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	1.38		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Calcium	3.49		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD05
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 10:52:00 AM
Lab ID:	G2009688-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	0.020	U	0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Magnesium	15.2		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Manganese	1.57		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Potassium	5.6		0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Sodium	6.0		0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Zinc	0.007	J	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
Hardness (SM 2340B)	71.1		0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:43 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 9:01 AM
Cadmium	0.3		0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:34 PM
Lead	0.4	J	0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:34 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:22 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:22 AM
Surr: 1,1,2,2-Tetrachloroethane	102		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 2:22 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:27 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:27 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 12:27 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 12:27 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD05
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 10:52:00 AM
Lab ID:	G2009688-003	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:27 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 12:27 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:27 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 12:27 PM
Surr: 1,2-Dichloroethane-d4	90.4		0	70-130	%REC	1		09/11/20 12:27 PM
Surr: 4-Bromofluorobenzene	110		0	70-130	%REC	1		09/11/20 12:27 PM
Surr: Dibromofluoromethane	85.0		0	70-130	%REC	1		09/11/20 12:27 PM
Surr: Toluene-d8	95.8		0	70-130	%REC	1		09/11/20 12:27 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD06
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 11:40:00 AM
Lab ID:	G2009688-004	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
FIELD PARAMETERS			Analyst:					**FIELD**
pH (Field)	6.21		0		S.U.			09/09/20 11:40 AM
Specific Conductance (Field)	253		0		µmhos/cm			09/09/20 11:40 AM
Temperature (Field)	15.4		0		deg C			09/09/20 11:40 AM
Turbidity (Field)	7.6		0		NTU			09/09/20 11:40 AM
PHYSICAL TESTS			Analyst:	**LRR**				**EPA 120.1**
Specific Conductance	322		2.0	5	µmhos/cm	1		09/14/20 4:02 PM
PH BY SM 4500 H+B			Analyst:	**LRR**				**SM 4500-H+ B**
Lab pH	6.65	H	0		S.U.	1		09/14/20 4:02 PM
INORGANIC NON-METALS			Analyst:	**GMG**			**SM 2540C**	**SM 2540 C**
Total dissolved solids	180		10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst:	**LRR**				**ASTM D 1067-11**
Alkalinity to pH 4.5	102		5.0	10	mg/L CaCO3	1		09/14/20 4:02 PM
INDICATOR ORGANIC PARAMETERS			Analyst:	**AVH**			**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst:	**MBG**			**EPA 300.0**	**EPA 300.0**
Chloride	30.7		0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 3:48 PM
Sulfate	6.2		0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 3:48 PM
INORGANIC NON-METALS			Analyst:	**MHF**				**EPA 350.1**
Ammonia Nitrogen	0.26		0.040	0.10	mg/L as N	1		09/22/20 12:00 PM
INORGANIC NON-METALS			Analyst:	**AMV**			**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	4.02		0.100	0.25	mg/L as N	5	09/14/20 4:48 PM	09/15/20 1:58 PM
INORGANIC NON-METALS			Analyst:	**AVH**			**EPA 180.1**	**EPA 180.1**
Turbidity	4.2		0.05	0.1	NTU	1	09/10/20 6:44 PM	09/10/20 6:58 PM
INORGANIC METALS			Analyst:	**LXM**			**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:57 AM
INORGANIC METALS			Analyst:	**MEG**			**EPA 3010 A**	**EPA 6010 D**
Barium	0.338		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Calcium	14.8		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD06
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 11:40:00 AM
Lab ID:	G2009688-004	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Iron	9.22		0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Magnesium	20.4		0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Manganese	4.96		0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Potassium	5.6		0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Sodium	16.3		0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Zinc	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
Hardness (SM 2340B)	121		0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:51 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.8	J	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 9:03 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:36 PM
Lead	0.2	J	0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:36 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:40 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:40 AM
Surr: 1,1,2,2-Tetrachloroethane	97.2		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 2:40 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:53 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:53 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 12:53 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 12:53 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	RHCD06
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 11:40:00 AM
Lab ID:	G2009688-004	**Sampled By:**	Tetra Tech
Matrix:	GROUNDWATER	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 12:53 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
trans-1,4-Dichloro-2-butene	1.00	UR1	1.00	2.0	µg/L	1		09/11/20 12:53 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 12:53 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 12:53 PM
Surr: 1,2-Dichloroethane-d4	90.4		0	70-130	%REC	1		09/11/20 12:53 PM
Surr: 4-Bromofluorobenzene	111		0	70-130	%REC	1		09/11/20 12:53 PM
Surr: Dibromofluoromethane	85.3		0	70-130	%REC	1		09/11/20 12:53 PM
Surr: Toluene-d8	96.2		0	70-130	%REC	1		09/11/20 12:53 PM

NOTES:

R1 - RPD above control limits between matrix spike and MS duplicates.

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	FB 1
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 11:55:00 AM
Lab ID:	G2009688-005	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
PHYSICAL TESTS			Analyst: **LRR**					**EPA 120.1**
Specific Conductance	3	J	2.0	5	µmhos/cm	1		09/14/20 4:08 PM
PH BY SM 4500 H+B			Analyst: **LRR**					**SM 4500-H+ B**
Lab pH	5.47	H	0		S.U.	1		09/14/20 4:08 PM
INORGANIC NON-METALS			Analyst: **GMG**				**SM 2540C**	**SM 2540 C**
Total dissolved solids	10	U	10	20	mg/L	1	09/11/20 4:30 PM	09/11/20 5:06 PM
INORGANIC NON-METALS			Analyst: **LRR**					**ASTM D 1067-11**
Alkalinity to pH 4.5	5.0	U	5.0	10	mg/L CaCO3	1		09/14/20 4:08 PM
INDICATOR ORGANIC PARAMETERS			Analyst: **AVH**				**Hach 8000**	**HACH 8000**
Chemical Oxygen Demand	5.0	U	5.0	10	mg/L	1	09/14/20 12:56 PM	09/14/20 5:13 PM
INORGANIC NON-METALS			Analyst: **MBG**				**EPA 300.0**	**EPA 300.0**
Chloride	0.20	U	0.20	1.0	mg/L	1	09/14/20 10:45 AM	09/14/20 4:06 PM
Sulfate	0.50	U	0.50	2.0	mg/L	1	09/14/20 10:45 AM	09/14/20 4:06 PM
INORGANIC NON-METALS			Analyst: **MHF**					**EPA 350.1**
Ammonia Nitrogen	0.05	J	0.040	0.10	mg/L as N	1		09/22/20 12:06 PM
INORGANIC NON-METALS			Analyst: **AMV**				**EPA 353.2**	**EPA 353.2**
Nitrate - Nitrite	0.020	U	0.020	0.05	mg/L as N	1	09/14/20 4:48 PM	09/15/20 2:00 PM
INORGANIC NON-METALS			Analyst: **AVH**				**EPA 180.1**	**EPA 180.1**
Turbidity	0	J	0.05	0.1	NTU	1	09/10/20 6:44 PM	09/10/20 6:58 PM
INORGANIC METALS			Analyst: **LXM**				**EPA 7470**	**EPA 7470**
Mercury	0.00010	U	0.00010	0.0002	mg/L	1	09/14/20 10:00 AM	09/15/20 9:59 AM
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Barium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Calcium	0.050	U	0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Chromium	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Copper	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Iron	0.020	U	0.020	0.05	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Magnesium	0.050	U	0.050	0.10	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Manganese	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Nickel	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Potassium	0.20	U	0.20	0.5	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Sodium	0.1	J	0.10	0.2	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	FB 1
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 11:55:00 AM
Lab ID:	G2009688-005	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
INORGANIC METALS			Analyst: **MEG**				**EPA 3010 A**	**EPA 6010 D**
Zinc	0.0050	U	0.0050	0.010	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
Hardness (SM 2340B)	0.50	U	0.50	1.0	mg/L	1	09/11/20 8:35 AM	09/14/20 8:52 AM
INORGANIC METALS			Analyst: **JEK**				**EPA 3010 A**	**EPA 6020 B**
Arsenic	0.50	U	0.50	1.0	µg/L	1	09/11/20 8:35 AM	09/15/20 9:05 AM
Cadmium	0.10	U	0.10	0.2	µg/L	1	09/11/20 8:35 AM	09/14/20 6:38 PM
Lead	0.20	U	0.20	1.0	µg/L	1	09/11/20 8:35 AM	09/14/20 6:38 PM
VOLATILE ORGANIC COMPOUNDS			Analyst: **ACW**				**EPA 8011**	**EPA 8011**
1,2-Dibromo-3-chloropropane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:58 AM
1,2-Dibromoethane	0.010	U	0.010	0.04	µg/L	1	09/14/20 10:06 AM	09/16/20 2:58 AM
Surr: 1,1,2,2-Tetrachloroethane	101		0	60-140	%REC	1	09/14/20 10:06 AM	09/16/20 2:58 AM
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
1,1,1,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,1,1-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,1,2,2-Tetrachloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,1,2-Trichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,1-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,1-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,2,3-Trichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,2-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,2-Dichloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,2-Dichloropropane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
1,4-Dichlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
2-Butanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 1:20 PM
2-Hexanone	1.00	U	1.00	5.0	µg/L	1		09/11/20 1:20 PM
4-Methyl-2-Pentanone	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Acetone	5.00	U	5.00	10	µg/L	1		09/11/20 1:20 PM
Acrylonitrile	2.00	U	2.00	5.0	µg/L	1		09/11/20 1:20 PM
Benzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Bromochloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Bromodichloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Bromoform	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Bromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Carbon Disulfide	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Carbon Tetrachloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Chlorobenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Chlorodibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Chloroethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Chloroform	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM

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I.D. 56-00306 PA DEP

Laboratory Results

Geochemical Testing

Date: *28-Sep-20*

CLIENT:	WM OF MARYLAND INC. / HRLF	**Client Sample ID:**	FB 1
Lab Order:	G2009688		
Project:	Hunting Ridge LF 221A	**Collection Date:**	9/9/2020 11:55:00 AM
Lab ID:	G2009688-005	**Sampled By:**	Tetra Tech
Matrix:	AQUEOUS	**DateReceived:**	9/10/2020 5:10:13 PM

Analyses	Result	Q	MDL	PQL	Units	DF	Date Prepared	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Analyst: **MTM**					**EPA 8260 D**
Chloromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
cis-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
cis-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Dibromomethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Ethylbenzene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Iodomethane	1.00	U	1.00	5.0	µg/L	1		09/11/20 1:20 PM
Methylene Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Methyl-tert-butyl ether	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Styrene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Tetrachloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Toluene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
trans-1,2-Dichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
trans-1,3-Dichloropropene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
trans-1,4-Dichloro-2-butene	1.00	U	1.00	2.0	µg/L	1		09/11/20 1:20 PM
Trichloroethene	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Trichlorofluoromethane	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Vinyl Acetate	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Vinyl Chloride	0.50	U	0.50	1.0	µg/L	1		09/11/20 1:20 PM
Total Xylene	1.00	U	1.00	2.0	µg/L	1		09/11/20 1:20 PM
Surr: 1,2-Dichloroethane-d4	90.4		0	70-130	%REC	1		09/11/20 1:20 PM
Surr: 4-Bromofluorobenzene	110		0	70-130	%REC	1		09/11/20 1:20 PM
Surr: Dibromofluoromethane	84.2		0	70-130	%REC	1		09/11/20 1:20 PM
Surr: Toluene-d8	95.4		0	70-130	%REC	1		09/11/20 1:20 PM

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I.D. 56-00306 PA DEP

Geochemical Testing

Quality Assurance Project Report
Prepared for
WM OF MARYLAND INC. / HRLF

9/29/2020

Signed: _____
Leslie Ann Nemeth
Project Manager

Signed: _____
David M. Glessner
Quality Assurance Coordinator

Geochemical Testing

Date: *29-Sep-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 721SA
Lab Order: G2009674

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
G2009674-001A	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-001B	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-001C	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-001D	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-001E	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-001F	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-001G	RHCD07		9/9/2020 12:31:00 PM	9/10/2020
G2009674-002A	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-002B	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-002C	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-002D	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-002E	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-002F	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-002G	RHCD08		9/9/2020 12:40:00 PM	9/10/2020
G2009674-003A	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-003B	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-003C	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-003D	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-003E	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-003F	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-003G	FB 2		9/9/2020 12:00:00 PM	9/10/2020
G2009674-004A	Trip Blank		9/10/2020 2:50:00 PM	9/10/2020
G2009674-004B	Trip Blank		9/10/2020 2:50:00 PM	9/10/2020
G2009674-004C	Trip Blank		9/10/2020 2:50:00 PM	9/10/2020

Geochemical Testing

Date: *29-Sep-20*

CLIENT: WM OF MARYLAND INC. / HRLF
Project: Hunting Ridge LF 221A
Lab Order: G2009688

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
G2009688-001A	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-001B	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-001C	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-001D	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-001E	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-001F	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-001G	WHCD03		9/9/2020 9:38:00 AM	9/10/2020
G2009688-002A	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-002B	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-002C	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-002D	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-002E	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-002F	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-002G	RHCD04		9/9/2020 10:20:00 AM	9/10/2020
G2009688-003A	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-003B	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-003C	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-003D	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-003E	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-003F	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-003G	RHCD05		9/9/2020 10:52:00 AM	9/10/2020
G2009688-004A	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-004B	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-004C	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-004D	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-004E	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-004F	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-004G	RHCD06		9/9/2020 11:40:00 AM	9/10/2020
G2009688-005A	FB 1		9/9/2020 11:55:00 AM	9/10/2020
G2009688-005B	FB 1		9/9/2020 11:55:00 AM	9/10/2020
G2009688-005C	FB 1		9/9/2020 11:55:00 AM	9/10/2020
G2009688-005D	FB 1		9/9/2020 11:55:00 AM	9/10/2020
G2009688-005E	FB 1		9/9/2020 11:55:00 AM	9/10/2020
G2009688-005F	FB 1		9/9/2020 11:55:00 AM	9/10/2020
G2009688-005G	FB 1		9/9/2020 11:55:00 AM	9/10/2020

Qualifier Exception Code

1) Spike recovery limits are not applicable when the sample concentration exceeds the spike concentration by a factor of four or greater.

2) Batch data is acceptable when the matrix spike exceeds control limits but the corresponding LCS is within control limits.

3) Laboratory duplicate. If one or both of the values is less than 5 times the PQL, the allowed difference is +/- the PQL.

4) The TNI standard allows for a specific number of LCS parameters to be within four standard deviations, also known as a Marginal Exceedance. The recovery for this analyte is outside the standard limits but within the allowed marginal exceedance.

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: COD_HACH 8000

Sample ID: **LCS 50-185414** SampType: **LCS1** TestCode: **COD_HACH 8** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238549**
Client ID: Batch ID: **185414** TestNo: **HACH 8000** Analysis Date: **9/14/2020** SeqNo: **6050784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	48.49	10	50	0	97.0	90	110				

Sample ID: **G2009705-002CMS** SampType: **MS** TestCode: **COD_HACH 8** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238549**
Client ID: Batch ID: **185414** TestNo: **HACH 8000** Analysis Date: **9/14/2020** SeqNo: **6050806**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	56.83	10	50	0	114	75	125				

Sample ID: **G2009705-002CMSD** SampType: **MSD** TestCode: **COD_HACH 8** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238549**
Client ID: Batch ID: **185414** TestNo: **HACH 8000** Analysis Date: **9/14/2020** SeqNo: **6050807**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	58.17	10	0	0	0	0	0	56.83	2.33	20	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: COND_EPA 120.1

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6049941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	150.0	5.00	146.9	0	102	90	110				

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	146.0	5.00	146.9	0	99.4	90	110				

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	146.0	5.00	146.9	0	99.4	90	110				

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	148.0	5.00	146.9	0	101	90	110				

Sample ID: **COND LL** SampType: **COND LL** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/15/2020** SeqNo: **6050235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	156.0	5.00	146.9	0	106	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6049939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1445	5.00	1409	0	103	90	110				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
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ANALYTICAL QC SUMMARY REPORT

TestCode: COND_EPA 120.1

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1371	5.00	1409	0	97.3	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1412	5.00	1409	0	100	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1371	5.00	1409	0	97.3	90	110				

Sample ID: **COND LCS** SampType: **LCS** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/15/2020** SeqNo: **6050234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1471	5.00	1409	0	104	90	110				

Sample ID: **G2009696-008ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6049975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1117	5.00						1114	0.269	20	

Sample ID: **G2009696-012ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6049999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	874.0	5.00						864	1.15	20	

CLIENT: WM OF MARYLAND INC. / HRLF
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ANALYTICAL QC SUMMARY REPORT

TestCode: COND_EPA 120.1

Sample ID: **G2009686-006ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1359	5.00						1351	0.590	20	

Sample ID: **G2009690-001ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	3285	5.00						3353	2.05	20	

Sample ID: **G2009695-002ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	8240	5.00						8320	0.966	20	

Sample ID: **G2009699-007ADUP** SampType: **DUP** TestCode: **COND_EPA 1** Units: **µmhos/cm** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **EPA 120.1** Analysis Date: **9/14/2020** SeqNo: **6050202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	651.0	5.00						640	1.70	20	

CLIENT: WM OF MARYLAND INC. / HRLF
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ANALYTICAL QC SUMMARY REPORT

TestCode: EDB_8011

Sample ID: **MBLK-185363** SampType: **MBLK** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **9/14/2020** RunNo: **238598**
Client ID: Batch ID: **185363** TestNo: **EPA 8011** Analysis Date: **9/15/2020** SeqNo: **6052853**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	< 0.0400	0.0400									
1,2-Dibromoethane	< 0.0400	0.0400									
Surr: 1,1,2,2-Tetrachloroethane	0.6050	0	0.571	0	106	60	140				

Sample ID: **LCS-185363** SampType: **LCS** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **9/14/2020** RunNo: **238598**
Client ID: Batch ID: **185363** TestNo: **EPA 8011** Analysis Date: **9/16/2020** SeqNo: **6052937**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.2980	0.0400	0.25	0	119	60	140				
1,2-Dibromoethane	0.3110	0.0400	0.25	0	124	60	140				
Surr: 1,1,2,2-Tetrachloroethane	0.6710	0	0.571	0	118	60	140				

Sample ID: **G2009674-002CMS** SampType: **MS** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **9/14/2020** RunNo: **238598**
Client ID: Batch ID: **185363** TestNo: **EPA 8011** Analysis Date: **9/16/2020** SeqNo: **6052893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.2500	0.0400	0.25	0	100	60	140				
1,2-Dibromoethane	0.2610	0.0400	0.25	0	104	60	140				
Surr: 1,1,2,2-Tetrachloroethane	0.5580	0	0.571	0	97.7	60	140				

Sample ID: **G2009674-002CMSD** SampType: **MSD** TestCode: **EDB_8011** Units: **µg/L** Prep Date: **9/14/2020** RunNo: **238598**
Client ID: Batch ID: **185363** TestNo: **EPA 8011** Analysis Date: **9/16/2020** SeqNo: **6052898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.2500	0.0400	0.25	0	100	60	140	0.25	0	20	
1,2-Dibromoethane	0.2630	0.0400	0.25	0	105	60	140	0.261	0.763	20	
Surr: 1,1,2,2-Tetrachloroethane	0.5650	0	0.571	0	98.9	60	140	0.558	0	0	

CLIENT: WM OF MARYLAND INC. / HRLF
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ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	< 1.00	1.00									
1,1,1-Trichloroethane	< 1.00	1.00									
1,1,2,2-Tetrachloroethane	< 1.00	1.00									
1,1,2-Trichloroethane	< 1.00	1.00									
1,1-Dichloroethane	< 1.00	1.00									
1,1-Dichloroethene	< 1.00	1.00									
1,1-Dichloropropene	< 1.00	1.00									
1,2,3-Trichlorobenzene	< 5.00	5.00									
1,2,3-Trichloropropane	< 1.00	1.00									
1,2,4-Trichlorobenzene	< 1.00	1.00									
1,2,4-Trimethylbenzene	< 1.00	1.00									
1,2-Dibromo-3-chloropropane	< 5.00	5.00									
1,2-Dibromoethane	< 1.00	1.00									
1,2-Dichlorobenzene	< 1.00	1.00									
1,2-Dichloroethane	< 1.00	1.00									
1,2-Dichloropropane	< 1.00	1.00									
1,3,5-Trimethylbenzene	< 1.00	1.00									
1,3-Dichlorobenzene	< 1.00	1.00									
1,3-Dichloropropane	< 1.00	1.00									
1,4-Dichlorobenzene	< 1.00	1.00									
1,4-Dioxane	< 50.0	50.0									
1-Propanol	< 100	100									
2,2-Dichloropropane	< 1.00	1.00									
2-Butanone	< 5.00	5.00									
2-chloro-1,3-butadiene	< 1.00	1.00									
2-Chlorotoluene	< 1.00	1.00									
2-Hexanone	< 5.00	5.00									
2-Methyl-1-propanol	< 50.0	50.0									
2-Methylnaphthalene	< 20.0	20.0									
2-Nitropropane	< 1.00	1.00									
2-Propanol	< 100	100									
3-Chloro-1-Propene	< 1.00	1.00									
4-Chlorotoluene	< 1.00	1.00									
4-Isopropyltoluene	< 1.00	1.00									
4-Methyl-2-Pentanone	< 1.00	1.00									
Acetone	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
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ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK**	SampType: **MBLK**	TestCode: **EPA8260_VO**	Units: **µg/L**	Prep Date:	RunNo: **238427**
Client ID:	Batch ID: **R238427**	TestNo: **EPA 8260 D**		Analysis Date: **9/11/2020**	SeqNo: **6046835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	< 20.0	20.0									
Allyl chloride	< 1.00	1.00									
Benzene	< 1.00	1.00									
Benzyl chloride	< 5.00	5.00									
Bromobenzene	< 1.00	1.00									
Bromochloromethane	< 1.00	1.00									
Bromodichloromethane	< 1.00	1.00									
Bromoform	< 1.00	1.00									
Bromomethane	< 1.00	1.00									
Carbon Disulfide	< 1.00	1.00									
Carbon Tetrachloride	< 1.00	1.00									
Chlorobenzene	< 1.00	1.00									
Chlorodibromomethane	< 1.00	1.00									
Chloroethane	< 1.00	1.00									
Chloroform	< 1.00	1.00									
Chloromethane	< 1.00	1.00									
Chloroprene	< 1.00	1.00									
cis-1,2-Dichloroethene	< 1.00	1.00									
cis-1,3-Dichloropropene	< 1.00	1.00									
Cyclohexane	< 5.00	5.00									
Dibromomethane	< 1.00	1.00									
Dichlorobromomethane	< 1.00	1.00									
Dichlorodifluoromethane	< 1.00	1.00									
Dichlorofluoromethane	< 1.00	1.00									
Diethyl Ether	< 5.00	5.00									
Diisopropyl ether	< 1.00	1.00									
Ethyl acetate	< 5.00	5.00									
Ethyl Methacrylate	< 1.00	1.00									
Ethylbenzene	< 1.00	1.00									
Hexachlorobutadiene	< 5.00	5.00									
Hexachloroethane	< 5.00	5.00									
Iodomethane	< 5.00	5.00									
Isobutyl alcohol	< 50.0	50.0									
Isopropylbenzene	< 1.00	1.00									
m,p-Xylene	< 2.00	2.00									
Methacrylonitrile	< 10.0	10.0									

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ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	< 5.00	5.00									
Methyl methacrylate	< 1.00	1.00									
Methylcyclohexane	< 1.00	1.00									
Methylene Chloride	< 1.00	1.00									
Methyl-tert-butyl ether	< 1.00	1.00									
Naphthalene	< 5.00	5.00									
n-Butanol	< 20.0	20.0									
n-Butylbenzene	< 1.00	1.00									
n-Propylbenzene	< 1.00	1.00									
o-Xylene	< 1.00	1.00									
p-Isopropyltoluene	< 1.00	1.00									
Propionitrile	< 10.0	10.0									
sec-Butylbenzene	< 1.00	1.00									
Styrene	< 1.00	1.00									
tert-Butylbenzene	< 1.00	1.00									
Tetrachloroethene	< 1.00	1.00									
Tetrahydrofuran	< 5.00	5.00									
Toluene	< 1.00	1.00									
Total Xylene	< 2.00	2.00									
trans-1,2-Dichloroethene	< 1.00	1.00									
trans-1,3-Dichloropropene	< 1.00	1.00									
trans-1,4-Dichloro-2-butene	< 2.00	2.00									
Tribromomethane	< 1.00	1.00									
Trichloroethene	< 1.00	1.00									
Trichlorofluoromethane	< 1.00	1.00									
Trichloromethane	< 1.00	1.00									
Vinyl Acetate	< 1.00	1.00									
Vinyl Chloride	< 1.00	1.00									
Surr: 1,2-Dichloroethane-d4	27.64	0	30	0	92.1	70	130				
Surr: 4-Bromofluorobenzene	28.40	0	30	0	94.7	70	130				
Surr: Dibromofluoromethane	26.50	0	30	0	88.3	70	130				
Surr: Toluene-d8	30.29	0	30	0	101	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
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ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK**	SampType: **MBLK**	TestCode: **EPA8260_VO**	Units: **µg/L**	Prep Date:	RunNo: **238445**
Client ID:	Batch ID: **R238445**	TestNo: **EPA 8260 D**		Analysis Date: **9/11/2020**	SeqNo: **6047225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	< 1.00	1.00									
1,1,1-Trichloroethane	< 1.00	1.00									
1,1,2,2-Tetrachloroethane	< 1.00	1.00									
1,1,2-Trichloroethane	< 1.00	1.00									
1,1-Dichloroethane	< 1.00	1.00									
1,1-Dichloroethene	< 1.00	1.00									
1,1-Dichloropropene	< 1.00	1.00									
1,2,3-Trichlorobenzene	< 5.00	5.00									
1,2,3-Trichloropropane	< 1.00	1.00									
1,2,4-Trichlorobenzene	< 1.00	1.00									
1,2,4-Trimethylbenzene	< 1.00	1.00									
1,2-Dibromo-3-chloropropane	< 5.00	5.00									
1,2-Dibromoethane	< 1.00	1.00									
1,2-Dichlorobenzene	< 1.00	1.00									
1,2-Dichloroethane	< 1.00	1.00									
1,2-Dichloropropane	< 1.00	1.00									
1,3,5-Trimethylbenzene	< 1.00	1.00									
1,3-Dichlorobenzene	< 1.00	1.00									
1,3-Dichloropropane	< 1.00	1.00									
1,4-Dichlorobenzene	< 1.00	1.00									
1,4-Dioxane	< 50.0	50.0									
1-Propanol	< 100	100									
2,2-Dichloropropane	< 1.00	1.00									
2-Butanone	< 5.00	5.00									
2-chloro-1,3-butadiene	< 1.00	1.00									
2-Chlorotoluene	< 1.00	1.00									
2-Hexanone	< 5.00	5.00									
2-Methyl-1-propanol	< 50.0	50.0									
2-Methylnaphthalene	< 20.0	20.0									
2-Nitropropane	< 1.00	1.00									
2-Propanol	< 100	100									
3-Chloro-1-Propene	< 1.00	1.00									
4-Chlorotoluene	< 1.00	1.00									
4-Isopropyltoluene	< 1.00	1.00									
4-Methyl-2-Pentanone	< 1.00	1.00									
Acetone	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK**	SampType: **MBLK**	TestCode: **EPA8260_VO**	Units: **µg/L**	Prep Date:	RunNo: **238445**
Client ID:	Batch ID: **R238445**	TestNo: **EPA 8260 D**		Analysis Date: **9/11/2020**	SeqNo: **6047225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	< 20.0	20.0									
Allyl chloride	< 1.00	1.00									
Benzene	< 1.00	1.00									
Benzyl chloride	< 5.00	5.00									
Bromobenzene	< 1.00	1.00									
Bromochloromethane	< 1.00	1.00									
Bromodichloromethane	< 1.00	1.00									
Bromoform	< 1.00	1.00									
Bromomethane	< 1.00	1.00									
Carbon Disulfide	< 1.00	1.00									
Carbon Tetrachloride	< 1.00	1.00									
Chlorobenzene	< 1.00	1.00									
Chlorodibromomethane	< 1.00	1.00									
Chloroethane	< 1.00	1.00									
Chloroform	< 1.00	1.00									
Chloromethane	< 1.00	1.00									
Chloroprene	< 1.00	1.00									
cis-1,2-Dichloroethene	< 1.00	1.00									
cis-1,3-Dichloropropene	< 1.00	1.00									
Cyclohexane	< 5.00	5.00									
Dibromomethane	< 1.00	1.00									
Dichlorobromomethane	< 1.00	1.00									
Dichlorodifluoromethane	< 1.00	1.00									
Dichlorofluoromethane	< 1.00	1.00									
Diethyl Ether	< 5.00	5.00									
Diisopropyl ether	< 1.00	1.00									
Ethyl acetate	< 5.00	5.00									
Ethyl Methacrylate	< 1.00	1.00									
Ethylbenzene	< 1.00	1.00									
Hexachlorobutadiene	< 5.00	5.00									
Hexachloroethane	< 5.00	5.00									
Iodomethane	< 5.00	5.00									
Isobutyl alcohol	< 50.0	50.0									
Isopropylbenzene	< 1.00	1.00									
m,p-Xylene	< 2.00	2.00									
Methacrylonitrile	< 10.0	10.0									

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **BLANK** SampType: **MBLK** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238445**
Client ID: Batch ID: **R238445** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6047225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	< 5.00	5.00									
Methyl methacrylate	< 1.00	1.00									
Methylcyclohexane	< 1.00	1.00									
Methylene Chloride	< 1.00	1.00									
Methyl-tert-butyl ether	< 1.00	1.00									
Naphthalene	< 5.00	5.00									
n-Butanol	< 20.0	20.0									
n-Butylbenzene	< 1.00	1.00									
n-Propylbenzene	< 1.00	1.00									
o-Xylene	< 1.00	1.00									
p-Isopropyltoluene	< 1.00	1.00									
Propionitrile	< 10.0	10.0									
sec-Butylbenzene	< 1.00	1.00									
Styrene	< 1.00	1.00									
tert-Butylbenzene	< 1.00	1.00									
Tetrachloroethene	< 1.00	1.00									
Tetrahydrofuran	< 5.00	5.00									
Toluene	< 1.00	1.00									
Total Xylene	< 2.00	2.00									
trans-1,2-Dichloroethene	< 1.00	1.00									
trans-1,3-Dichloropropene	< 1.00	1.00									
trans-1,4-Dichloro-2-butene	< 2.00	2.00									
Tribromomethane	< 1.00	1.00									
Trichloroethene	< 1.00	1.00									
Trichlorofluoromethane	< 1.00	1.00									
Trichloromethane	< 1.00	1.00									
Vinyl Acetate	< 1.00	1.00									
Vinyl Chloride	< 1.00	1.00									
Surr: 1,2-Dichloroethane-d4	26.98	0	30	0	89.9	70	130				
Surr: 4-Bromofluorobenzene	33.05	0	30	0	110	70	130				
Surr: Dibromofluoromethane	25.28	0	30	0	84.3	70	130				
Surr: Toluene-d8	28.67	0	30	0	95.6	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.77	1.00	20	0	98.8	81	125				
1,1,1-Trichloroethane	18.55	1.00	20	0	92.7	71	125				
1,1,2,2-Tetrachloroethane	18.79	1.00	20	0	94.0	80	116				
1,1,2-Trichloroethane	19.77	1.00	20	0	98.8	83	126				
1,1-Dichloroethane	19.39	1.00	20	0	97.0	73	122				
1,1-Dichloroethene	18.96	1.00	20	0	94.8	74	121				
1,1-Dichloropropene	19.58	1.00	20	0	97.9	74	120				
1,2,3-Trichlorobenzene	16.23	5.00	20	0	81.2	61	136				
1,2,3-Trichloropropane	18.34	1.00	20	0	91.7	77	118				
1,2,4-Trichlorobenzene	17.20	1.00	20	0	86.0	68	126				
1,2,4-Trimethylbenzene	18.61	1.00	20	0	93.1	78	128				
1,2-Dibromo-3-chloropropane	18.86	5.00	20	0	94.3	64	126				
1,2-Dibromoethane	19.88	1.00	20	0	99.4	83	119				
1,2-Dichlorobenzene	19.00	1.00	20	0	95.0	85	119				
1,2-Dichloroethane	19.78	1.00	20	0	98.9	72	123				
1,2-Dichloropropane	20.94	1.00	20	0	105	83	122				
1,3,5-Trimethylbenzene	18.87	1.00	20	0	94.3	85	119				
1,3-Dichlorobenzene	19.14	1.00	20	0	95.7	82	119				
1,3-Dichloropropane	20.63	1.00	20	0	103	80	118				
1,4-Dichlorobenzene	19.15	1.00	20	0	95.7	83	120				
1,4-Dioxane	212.2	50.0	200	0	106	39	186				
1-Propanol	189.0	100	200	0	94.5	36	170				
2,2-Dichloropropane	18.72	1.00	20	0	93.6	32	157				
2-Butanone	18.08	5.00	20	0	90.4	61	125				
2-chloro-1,3-butadiene	19.55	1.00	20	0	97.8	70	124				
2-Chlorotoluene	18.86	1.00	20	0	94.3	82	123				
2-Hexanone	17.46	5.00	20	0	87.3	58	132				
2-Methyl-1-propanol	168.3	50.0	200	0	84.1	29	163				
2-Methylnaphthalene	< 20.0	20.0	20	0	72.6	41	143				
2-Nitropropane	17.56	1.00	20	0	87.8	60	138				
2-Propanol	179.8	100	200	0	89.9	43	161				
3-Chloro-1-Propene	19.71	1.00	20	0	98.5	65	127				
4-Chlorotoluene	19.19	1.00	20	0	96.0	80	121				
4-Isopropyltoluene	18.66	1.00	20	0	93.3	83	117				
4-Methyl-2-Pentanone	19.93	1.00	20	0	99.7	68	127				
Acetone	18.38	10.0	20	0	91.9	60	133				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	188.6	20.0	200	0	94.3	61	132				
Allyl chloride	19.71	1.00	20	0	98.5	65	127				
Benzene	18.94	1.00	20	0	94.7	76	122				
Benzyl chloride	17.41	5.00	20	0	87.1	20	154				
Bromobenzene	18.79	1.00	20	0	94.0	78	120				
Bromochloromethane	20.07	1.00	20	0	100	78	124				
Bromodichloromethane	20.02	1.00	20	0	100	71	138				
Bromoform	18.51	1.00	20	0	92.5	71	125				
Bromomethane	26.75	1.00	20	0	134	47	152				
Carbon Disulfide	17.95	1.00	20	0	89.7	63	123				
Carbon Tetrachloride	18.53	1.00	20	0	92.6	68	133				
Chlorobenzene	20.47	1.00	20	0	102	83	118				
Chlorodibromomethane	20.38	1.00	20	0	102	74	131				
Chloroethane	24.28	1.00	20	0	121	56	127				
Chloroform	18.64	1.00	20	0	93.2	73	123				
Chloromethane	19.26	1.00	20	0	96.3	65	129				
Chloroprene	19.55	1.00	20	0	97.8	70	124				
cis-1,2-Dichloroethene	19.04	1.00	20	0	95.2	75	121				
cis-1,3-Dichloropropene	20.42	1.00	20	0	102	71	129				
Cyclohexane	18.63	5.00	20	0	93.1	72	119				
Dibromomethane	20.04	1.00	20	0	100	83	118				
Dichlorobromomethane	20.02	1.00	20	0	100	56	145				
Dichlorodifluoromethane	18.48	1.00	20	0	92.4	60	138				
Dichlorofluoromethane	20.66	1.00	20	0	103	74	123				
Diethyl Ether	19.43	5.00	20	0	97.2	54	142				
Diisopropyl ether	19.28	1.00	20	0	96.4	72	132				
Ethyl acetate	17.65	5.00	20	0	88.2	77	123				
Ethyl Methacrylate	19.62	1.00	20	0	98.1	72	126				
Ethylbenzene	20.02	1.00	20	0	100	84	120				
Hexachlorobutadiene	16.10	5.00	20	0	80.5	70	118				
Hexachloroethane	17.05	5.00	20	0	85.3	59	130				
Iodomethane	22.34	5.00	20	0	112	29	162				
Isobutyl alcohol	168.3	50.0	200	0	84.1	29	163				
Isopropylbenzene	19.76	1.00	20	0	98.8	83	124				
m,p-Xylene	40.73	2.00	40	0	102	86	117				
Methacrylonitrile	187.1	10.0	200	0	93.5	69	126				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	18.08	5.00	20	0	90.4	72	131				
Methyl methacrylate	19.42	1.00	20	0	97.1	74	122				
Methylcyclohexane	18.96	1.00	20	0	94.8	76	116				
Methylene Chloride	18.70	1.00	20	0	93.5	73	133				
Methyl-tert-butyl ether	19.14	1.00	20	0	95.7	75	125				
Naphthalene	16.56	5.00	20	0	82.8	59	134				
n-Butanol	171.4	20.0	200	0	85.7	56	152				
n-Butylbenzene	18.79	1.00	20	0	93.9	79	116				
n-Propylbenzene	19.10	1.00	20	0	95.5	82	119				
o-Xylene	20.08	1.00	20	0	100	86	117				
p-Isopropyltoluene	18.66	1.00	20	0	93.3	83	117				
Propionitrile	182.5	10.0	200	0	91.3	63	129				
sec-Butylbenzene	18.73	1.00	20	0	93.6	82	119				
Styrene	20.15	1.00	20	0	101	88	116				
tert-Butylbenzene	18.42	1.00	20	0	92.1	79	127				
Tetrachloroethene	19.65	1.00	20	0	98.2	76	127				
Tetrahydrofuran	17.49	5.00	20	0	87.5	62	129				
Toluene	20.29	1.00	20	0	101	80	118				
Total Xylene	60.81	2.00	60	0	101	87	116				
trans-1,2-Dichloroethene	18.89	1.00	20	0	94.5	73	120				
trans-1,3-Dichloropropene	19.84	1.00	20	0	99.2	70	126				
trans-1,4-Dichloro-2-butene	17.92	2.00	20	0	89.6	46	137				
Tribromomethane	18.51	1.00	20	0	92.5	71	125				
Trichloroethene	20.48	1.00	20	0	102	73	123				
Trichlorofluoromethane	19.65	1.00	20	0	98.3	69	125				
Trichloromethane	18.64	1.00	20	0	93.2	73	123				
Vinyl Acetate	17.80	1.00	20	0	89.0	67	131				
Vinyl Chloride	23.75	1.00	20	0	119	56	125				
Surr: 1,2-Dichloroethane-d4	27.66	0	30	0	92.2	70	130				
Surr: 4-Bromofluorobenzene	28.72	0	30	0	95.7	70	130				
Surr: Dibromofluoromethane	27.12	0	30	0	90.4	70	130				
Surr: Toluene-d8	30.29	0	30	0	101	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238445**
Client ID: Batch ID: **R238445** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6047221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.09	1.00	20	0	95.5	81	125				
1,1,1-Trichloroethane	17.89	1.00	20	0	89.4	71	125				
1,1,2,2-Tetrachloroethane	20.62	1.00	20	0	103	80	116				
1,1,2-Trichloroethane	17.88	1.00	20	0	89.4	83	126				
1,1-Dichloroethane	18.23	1.00	20	0	91.2	73	122				
1,1-Dichloroethene	18.26	1.00	20	0	91.3	74	121				
1,1-Dichloropropene	17.94	1.00	20	0	89.7	74	120				
1,2,3-Trichlorobenzene	17.70	5.00	20	0	88.5	61	136				
1,2,3-Trichloropropane	20.19	1.00	20	0	101	77	118				
1,2,4-Trichlorobenzene	17.70	1.00	20	0	88.5	68	126				
1,2,4-Trimethylbenzene	20.21	1.00	20	0	101	78	128				
1,2-Dibromo-3-chloropropane	17.78	5.00	20	0	88.9	64	126				
1,2-Dibromoethane	17.54	1.00	20	0	87.7	83	119				
1,2-Dichlorobenzene	19.54	1.00	20	0	97.7	85	119				
1,2-Dichloroethane	18.22	1.00	20	0	91.1	72	123				
1,2-Dichloropropane	18.29	1.00	20	0	91.5	83	122				
1,3,5-Trimethylbenzene	20.32	1.00	20	0	102	85	119				
1,3-Dichlorobenzene	19.72	1.00	20	0	98.6	82	119				
1,3-Dichloropropane	17.95	1.00	20	0	89.7	80	118				
1,4-Dichlorobenzene	19.77	1.00	20	0	98.8	83	120				
1,4-Dioxane	181.3	50.0	200	0	90.7	39	186				
1-Propanol	180.4	100	200	0	90.2	36	170				
2,2-Dichloropropane	17.86	1.00	20	0	89.3	32	157				
2-Butanone	17.60	5.00	20	0	88.0	61	125				
2-chloro-1,3-butadiene	19.23	1.00	20	0	96.1	70	124				
2-Chlorotoluene	19.90	1.00	20	0	99.5	82	123				
2-Hexanone	18.43	5.00	20	0	92.2	58	132				
2-Methyl-1-propanol	191.6	50.0	200	0	95.8	29	163				
2-Methylnaphthalene	< 20.0	20.0	20	0	75.5	41	143				
2-Nitropropane	16.26	1.00	20	0	81.3	60	138				
2-Propanol	167.3	100	200	0	83.7	43	161				
3-Chloro-1-Propene	18.07	1.00	20	0	90.4	65	127				
4-Chlorotoluene	20.85	1.00	20	0	104	80	121				
4-Isopropyltoluene	20.07	1.00	20	0	100	83	117				
4-Methyl-2-Pentanone	17.46	1.00	20	0	87.3	68	127				
Acetone	16.81	10.0	20	0	84.1	60	133				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238445**
Client ID: Batch ID: **R238445** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6047221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetonitrile	187.2	20.0	200	0	93.6	61	132				
Allyl chloride	18.07	1.00	20	0	90.4	65	127				
Benzene	17.22	1.00	20	0	86.1	76	122				
Benzyl chloride	16.51	5.00	20	0	82.6	20	154				
Bromobenzene	20.52	1.00	20	0	103	78	120				
Bromochloromethane	17.58	1.00	20	0	87.9	78	124				
Bromodichloromethane	17.72	1.00	20	0	88.6	71	138				
Bromoform	17.36	1.00	20	0	86.8	71	125				
Bromomethane	21.24	1.00	20	0	106	47	152				
Carbon Disulfide	17.39	1.00	20	0	87.0	63	123				
Carbon Tetrachloride	17.96	1.00	20	0	89.8	68	133				
Chlorobenzene	19.20	1.00	20	0	96.0	83	118				
Chlorodibromomethane	16.92	1.00	20	0	84.6	74	131				
Chloroethane	21.96	1.00	20	0	110	56	127				
Chloroform	17.80	1.00	20	0	89.0	73	123				
Chloromethane	21.47	1.00	20	0	107	65	129				
Chloroprene	19.23	1.00	20	0	96.1	70	124				
cis-1,2-Dichloroethene	17.60	1.00	20	0	88.0	75	121				
cis-1,3-Dichloropropene	17.50	1.00	20	0	87.5	71	129				
Cyclohexane	18.80	5.00	20	0	94.0	72	119				
Dibromomethane	17.30	1.00	20	0	86.5	83	118				
Dichlorobromomethane	17.72	1.00	20	0	88.6	56	145				
Dichlorodifluoromethane	25.84	1.00	20	0	129	60	138				
Dichlorofluoromethane	19.30	1.00	20	0	96.5	74	123				
Diethyl Ether	18.19	5.00	20	0	90.9	54	142				
Diisopropyl ether	18.69	1.00	20	0	93.5	72	132				
Ethyl acetate	18.03	5.00	20	0	90.2	77	123				
Ethyl Methacrylate	17.97	1.00	20	0	89.9	72	126				
Ethylbenzene	19.48	1.00	20	0	97.4	84	120				
Hexachlorobutadiene	17.62	5.00	20	0	88.1	70	118				
Hexachloroethane	18.56	5.00	20	0	92.8	59	130				
Iodomethane	19.41	5.00	20	0	97.1	29	162				
Isobutyl alcohol	191.6	50.0	200	0	95.8	29	163				
Isopropylbenzene	19.14	1.00	20	0	95.7	83	124				
m,p-Xylene	39.27	2.00	40	0	98.2	86	117				
Methacrylonitrile	188.5	10.0	200	0	94.2	69	126				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **20 PPB LCS** SampType: **LCS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238445**
Client ID: Batch ID: **R238445** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6047221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Ethyl Ketone	17.60	5.00	20	0	88.0	72	131				
Methyl methacrylate	18.01	1.00	20	0	90.0	74	122				
Methylcyclohexane	18.76	1.00	20	0	93.8	76	116				
Methylene Chloride	16.70	1.00	20	0	83.5	73	133				
Methyl-tert-butyl ether	18.09	1.00	20	0	90.5	75	125				
Naphthalene	17.82	5.00	20	0	89.1	59	134				
n-Butanol	220.5	20.0	200	0	110	56	152				
n-Butylbenzene	20.14	1.00	20	0	101	79	116				
n-Propylbenzene	20.59	1.00	20	0	103	82	119				
o-Xylene	19.50	1.00	20	0	97.5	86	117				
p-Isopropyltoluene	20.07	1.00	20	0	100	83	117				
Propionitrile	178.4	10.0	200	0	89.2	63	129				
sec-Butylbenzene	19.66	1.00	20	0	98.3	82	119				
Styrene	19.55	1.00	20	0	97.8	88	116				
tert-Butylbenzene	20.06	1.00	20	0	100	79	127				
Tetrachloroethene	16.00	1.00	20	0	80.0	76	127				
Tetrahydrofuran	18.30	5.00	20	0	91.5	62	129				
Toluene	17.87	1.00	20	0	89.4	80	118				
Total Xylene	58.77	2.00	60	0	97.9	87	116				
trans-1,2-Dichloroethene	17.98	1.00	20	0	89.9	73	120				
trans-1,3-Dichloropropene	17.50	1.00	20	0	87.5	70	126				
trans-1,4-Dichloro-2-butene	19.71	2.00	20	0	98.5	46	137				
Tribromomethane	17.36	1.00	20	0	86.8	71	125				
Trichloroethene	17.62	1.00	20	0	88.1	73	123				
Trichlorofluoromethane	19.48	1.00	20	0	97.4	69	125				
Trichloromethane	17.80	1.00	20	0	89.0	73	123				
Vinyl Acetate	18.55	1.00	20	0	92.7	67	131				
Vinyl Chloride	21.91	1.00	20	0	110	56	125				
Surr: 1,2-Dichloroethane-d4	25.79	0	30	0	86.0	70	130				
Surr: 4-Bromofluorobenzene	33.17	0	30	0	111	70	130				
Surr: Dibromofluoromethane	26.77	0	30	0	89.2	70	130				
Surr: Toluene-d8	28.56	0	30	0	95.2	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	17.81	1.00	20	0	89.1	76	117				
1,1,1-Trichloroethane	17.79	1.00	20	0	89.0	72	122				
1,1,2,2-Tetrachloroethane	17.13	1.00	20	0	85.6	72	110				
1,1,2-Trichloro-1,2,2-Trifluoroethane	18.33	1.00	20	0	91.6	66	123				
1,1,2-Trichloroethane	17.64	1.00	20	0	88.2	76	126				
1,1-Dichloroethane	17.94	1.00	20	0	89.7	66	126				
1,1-Dichloroethene	18.06	1.00	20	0	90.3	66	121				
1,1-Dichloropropene	18.41	1.00	20	0	92.1	71	120				
1,2,3-Trichlorobenzene	14.73	5.00	20	0	73.6	43	148				
1,2,3-Trichloropropane	16.94	1.00	20	0	84.7	72	112				
1,2,3-Trimethylbenzene	16.59	1.00	20	0	82.9	74	118				
1,2,4-Trichlorobenzene	15.69	1.00	20	0	78.4	61	127				
1,2,4-Trimethylbenzene	17.17	1.00	20	0	85.8	78	128				
1,2-Dibromo-3-chloropropane	16.74	5.00	20	0	83.7	57	121				
1,2-Dibromoethane	17.44	1.00	20	0	87.2	75	113				
1,2-Dichlorobenzene	17.18	1.00	20	0	85.9	76	108				
1,2-Dichloroethane	18.13	1.00	20	0	90.6	69	116				
1,2-Dichloropropane	18.59	1.00	20	0	93.0	78	122				
1,3,5-Trimethylbenzene	17.35	1.00	20	0	86.8	79	111				
1,3-Dichlorobenzene	17.57	1.00	20	0	87.9	71	120				
1,3-Dichloropropane	18.10	1.00	20	0	90.5	76	110				
1,4-Dichlorobenzene	17.47	1.00	20	0	87.3	70	121				
1,4-Dioxane	179.7	50.0	200	0	89.8	33	189				
1-Propanol	167.1	100	200	0	83.5	46	146				
2,2-Dichloropropane	18.48	1.00	20	0	92.4	29	160				
2-Butanone	16.38	5.00	20	0	81.9	59	118				
2-chloro-1,3-butadiene	18.84	1.00	20	0	94.2	74	122				
2-Chlorotoluene	17.49	1.00	20	0	87.4	76	115				
2-Hexanone	15.15	5.00	20	0	75.8	63	120				
2-Methyl-1-propanol	154.9	50.0	200	0	77.4	37	145				
2-Methylnaphthalene	< 20.0	20.0	20	0	62.3	24	165				
2-Nitropropane	15.32	1.00	20	0	76.6	57	128				
2-Propanol	165.4	100	200	0	82.7	43	152				
3-Chloro-1-Propene	18.27	1.00	20	0	91.3	64	124				
4-Chlorotoluene	17.49	1.00	20	0	87.5	75	118				
4-Isopropyltoluene	17.51	1.00	20	0	87.6	76	114				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Methyl-2-Pentanone	16.97	1.00	20	0	84.9	68	116				
Acetone	16.00	10.0	20	0	80.0	51	133				
Acetonitrile	172.2	20.0	200	0	86.1	50	134				
Acrolein	15.58	10.0	20	0	77.9	8	140				
Acrylonitrile	16.61	5.00	20	0	83.0	64	122				
Benzene	17.45	1.00	20	0	87.3	52	125				
Benzyl chloride	17.13	5.00	20	0	85.7	13	141				
Bromobenzene	17.27	1.00	20	0	86.4	75	116				
Bromochloromethane	18.39	1.00	20	0	91.9	71	117				
Bromodichloromethane	17.46	1.00	20	0	87.3	68	132				
Bromoethane	17.90	1.00	20	0	89.5	72	124				
Bromoform	16.34	1.00	20	0	81.7	65	117				
Bromomethane	23.81	1.00	20	0	119	40	156				
Carbon Disulfide	16.78	1.00	20	0	83.9	60	123				
Carbon Tetrachloride	17.37	1.00	20	0	86.8	67	132				
Chlorobenzene	18.07	1.00	20	0	90.3	78	111				
Chlorodibromomethane	17.90	1.00	20	0	89.5	70	123				
Chloroethane	22.80	1.00	20	0	114	46	132				
Chloroform	17.10	1.00	20	0	85.5	69	117				
Chloromethane	17.78	1.00	20	0	88.9	51	129				
Chloroprene	18.84	1.00	20	0	94.2	68	120				
cis-1,2-Dichloroethene	17.65	1.00	20	0	88.3	71	117				
cis-1,3-Dichloropropene	18.01	1.00	20	0	90.0	71	117				
Cyclohexane	17.05	5.00	20	0	85.2	73	120				
Cyclohexanone	< 10.0	10.0	20	0	49.6	41	143				
Dibromomethane	17.69	1.00	20	0	88.5	77	110				
Dichlorobromomethane	17.46	1.00	20	0	87.3	74	117				
Dichlorodifluoromethane	14.94	1.00	20	0	74.7	34	140				
Dichlorofluoromethane	19.57	1.00	20	0	97.8	70	123				
Diethyl Ether	17.61	5.00	20	0	88.1	54	142				
Dimethoxymethane	16.48	1.00	20	0	82.4	60	134				
Ethyl acetate	15.97	5.00	20	0	79.9	50	128				
Ethyl Methacrylate	17.29	1.00	20	0	86.5	71	127				
Ethylbenzene	18.45	1.00	20	0	92.2	72	122				
Hexachlorobutadiene	15.33	5.00	20	0	76.7	63	129				
Hexachloroethane	15.29	5.00	20	0	76.5	59	123				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iodomethane	21.12	5.00	20	0	106	34	150				
Isobutyl alcohol	154.9	50.0	200	0	77.4	38	142				
Isopropylbenzene	18.34	1.00	20	0	91.7	73	124				
m,p-Xylene	36.66	2.00	40	0	91.7	75	119				
Methacrylonitrile	169.5	10.0	200	0	84.8	65	119				
Methyl Acetate	165.8	10.0	200	0	82.9	57	112				
Methyl Ethyl Ketone	16.38	5.00	20	0	81.9	59	121				
Methyl methacrylate	16.87	1.00	20	0	84.4	71	121				
Methylcyclohexane	17.82	1.00	20	0	89.1	70	118				
Methylene Chloride	16.60	1.00	20	0	83.0	64	121				
Methyl-tert-butyl ether	17.49	1.00	20	0	87.4	71	123				
Naphthalene	14.68	5.00	20	0	73.4	48	140				
n-Butanol	150.8	20.0	200	0	75.4	30	146				
n-Butylbenzene	17.50	1.00	20	0	87.5	68	131				
n-Propylbenzene	17.90	1.00	20	0	89.5	72	124				
o-Xylene	18.28	1.00	20	0	91.4	76	118				
Pentachloroethane	17.06	2.00	20	0	85.3	70	122				
p-Isopropyltoluene	17.51	1.00	20	0	87.6	76	114				
Propionitrile	169.7	10.0	200	0	84.8	59	122				
sec-Butylbenzene	17.40	1.00	20	0	87.0	73	120				
Styrene	17.69	1.00	20	0	88.5	78	117				
tert-Butylbenzene	17.10	1.00	20	0	85.5	73	121				
Tetrachloroethene	20.51	1.00	20	0	103	67	122				
Tetrahydrofuran	15.45	5.00	20	0	77.2	44	135				
Toluene	18.21	1.00	20	0	91.1	75	115				
Total Xylene	54.94	2.00	60	0	91.6	72	120				
trans-1,2-Dichloroethene	17.46	1.00	20	0	87.3	69	118				
trans-1,3-Dichloropropene	18.09	1.00	20	0	90.4	66	122				
trans-1,4-Dichloro-2-butene	16.18	2.00	20	0	80.9	46	131				
Tribromomethane	16.34	1.00	20	0	81.7	65	117				
Trichloroethene	18.62	1.00	20	0	93.1	75	117				
Trichlorofluoromethane	18.52	1.00	20	0	92.6	69	125				
Trichloromethane	17.10	1.00	20	0	85.5	69	117				
Vinyl Acetate	16.31	1.00	20	0	81.6	46	126				
Vinyl Chloride	22.11	1.00	20	0	111	54	128				
Surr: 1,2-Dichloroethane-d4	29.04	0	30	0	96.8	70	130				

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMS** SampType: **MS** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	28.94	0	30	0	96.5	70	130				
Surr: Dibromofluoromethane	28.03	0	30	0	93.4	70	130				
Surr: Toluene-d8	30.21	0	30	0	101	70	130				

Sample ID: **G2009676-005FMSD** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	17.66	1.00	20	0	88.3	76	117	17.81	0.851	11	
1,1,1-Trichloroethane	16.91	1.00	20	0	84.6	72	122	17.79	5.08	12	
1,1,2,2-Tetrachloroethane	17.32	1.00	20	0	86.6	72	110	17.13	1.12	14	
1,1,2-Trichloro-1,2,2-Trifluoroethane	17.66	1.00	20	0	88.3	66	123	18.33	3.72	24	
1,1,2-Trichloroethane	17.62	1.00	20	0	88.1	76	126	17.64	0.119	15	
1,1-Dichloroethane	17.28	1.00	20	0	86.4	66	126	17.94	3.70	12	
1,1-Dichloroethene	17.03	1.00	20	0	85.2	66	121	18.06	5.84	14	
1,1-Dichloropropene	17.85	1.00	20	0	89.2	71	120	18.41	3.12	13	
1,2,3-Trichlorobenzene	14.69	5.00	20	0	73.5	43	148	14.73	0.258	30	
1,2,3-Trichloropropane	16.96	1.00	20	0	84.8	72	112	16.94	0.136	14	
1,2,3-Trimethylbenzene	16.83	1.00	20	0	84.1	74	118	16.59	1.45	22	
1,2,4-Trichlorobenzene	15.51	1.00	20	0	77.5	61	127	15.69	1.14	23	
1,2,4-Trimethylbenzene	17.10	1.00	20	0	85.5	78	128	17.17	0.391	13	
1,2-Dibromo-3-chloropropane	16.33	5.00	20	0	81.7	57	121	16.74	2.47	20	
1,2-Dibromoethane	17.68	1.00	20	0	88.4	75	113	17.44	1.37	17	
1,2-Dichlorobenzene	17.31	1.00	20	0	86.5	76	108	17.18	0.777	13	
1,2-Dichloroethane	17.70	1.00	20	0	88.5	69	116	18.13	2.42	11	
1,2-Dichloropropane	18.36	1.00	20	0	91.8	78	122	18.59	1.25	12	
1,3,5-Trimethylbenzene	17.18	1.00	20	0	85.9	79	111	17.35	1.01	13	
1,3-Dichlorobenzene	17.79	1.00	20	0	89.0	71	120	17.57	1.24	16	
1,3-Dichloropropane	18.45	1.00	20	0	92.2	76	110	18.1	1.90	17	
1,4-Dichlorobenzene	17.28	1.00	20	0	86.4	70	121	17.47	1.05	16	
1,4-Dioxane	185.8	50.0	200	0	92.9	33	189	179.7	3.35	41	
1-Propanol	159.8	100	200	0	79.9	46	146	167.1	4.47	38	
2,2-Dichloropropane	17.58	1.00	20	0	87.9	29	160	18.48	4.95	13	
2-Butanone	15.75	5.00	20	0	78.7	59	118	16.38	3.93	23	
2-chloro-1,3-butadiene	17.92	1.00	20	0	89.6	74	122	18.84	5.02	12	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMSD** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	17.60	1.00	20	0	88.0	76	115	17.49	0.627	16	
2-Hexanone	15.51	5.00	20	0	77.5	63	120	15.15	2.31	18	
2-Methyl-1-propanol	148.6	50.0	200	0	74.3	37	145	154.9	4.14	24	
2-Methylnaphthalene	< 20.0	20.0	20	0	61.6	24	165	12.47	0	52	
2-Nitropropane	15.47	1.00	20	0	77.4	57	128	15.32	1.01	17	
2-Propanol	159.2	100	200	0	79.6	43	152	165.4	3.87	31	
3-Chloro-1-Propene	17.98	1.00	20	0	89.9	64	124	18.27	1.60	24	
4-Chlorotoluene	17.86	1.00	20	0	89.3	75	118	17.49	2.08	15	
4-Isopropyltoluene	17.21	1.00	20	0	86.0	76	114	17.51	1.76	13	
4-Methyl-2-Pentanone	17.64	1.00	20	0	88.2	68	116	16.97	3.87	18	
Acetone	16.10	10.0	20	0	80.5	51	133	16	0.611	23	
Acetonitrile	163.5	20.0	200	0	81.8	50	134	172.2	5.20	28	
Acrolein	15.09	10.0	20	0	75.4	8	140	15.58	3.22	25	
Acrylonitrile	16.51	5.00	20	0	82.5	64	122	16.61	0.622	16	
Benzene	17.00	1.00	20	0	85.0	52	125	17.45	2.65	15	
Benzyl chloride	17.18	5.00	20	0	85.9	13	141	17.13	0.280	22	
Bromobenzene	17.23	1.00	20	0	86.1	75	116	17.27	0.272	15	
Bromochloromethane	18.03	1.00	20	0	90.1	71	117	18.39	1.99	12	
Bromodichloromethane	17.55	1.00	20	0	87.8	68	132	17.46	0.554	18	
Bromoethane	17.50	1.00	20	0	87.5	72	124	17.9	2.23	22	
Bromoform	16.60	1.00	20	0	83.0	65	117	16.34	1.62	14	
Bromomethane	23.79	1.00	20	0	119	40	156	23.81	0.0756	22	
Carbon Disulfide	15.97	1.00	20	0	79.9	60	123	16.78	4.96	13	
Carbon Tetrachloride	16.84	1.00	20	0	84.2	67	132	17.37	3.06	12	
Chlorobenzene	18.21	1.00	20	0	91.0	78	111	18.07	0.772	10	
Chlorodibromomethane	18.31	1.00	20	0	91.5	70	123	17.9	2.25	16	
Chloroethane	19.78	1.00	20	0	98.9	46	132	22.8	14.2	17	
Chloroform	16.70	1.00	20	0	83.5	69	117	17.1	2.35	13	
Chloromethane	17.21	1.00	20	0	86.1	51	129	17.78	3.24	16	
Chloroprene	17.92	1.00	20	0	89.6	68	120	18.84	5.02	13	
cis-1,2-Dichloroethene	17.28	1.00	20	0	86.4	71	117	17.65	2.14	12	
cis-1,3-Dichloropropene	18.20	1.00	20	0	91.0	71	117	18.01	1.05	16	
Cyclohexane	16.62	5.00	20	0	83.1	73	120	17.05	2.56	13	
Cyclohexanone	10.52	10.0	20	0	52.6	41	143	9.913	5.98	24	
Dibromomethane	17.77	1.00	20	0	88.9	77	110	17.69	0.457	14	
Dichlorobromomethane	17.55	1.00	20	0	87.8	74	117	17.46	0.554	13	

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Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMSD** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	14.76	1.00	20	0	73.8	34	140	14.94	1.19	18	
Dichlorofluoromethane	18.76	1.00	20	0	93.8	70	123	19.57	4.19	17	
Diethyl Ether	17.25	5.00	20	0	86.3	54	142	17.61	2.08	18	
Dimethoxymethane	15.94	1.00	20	0	79.7	60	134	16.48	3.31	21	
Ethyl acetate	16.00	5.00	20	0	80.0	50	128	15.97	0.169	22	
Ethyl Methacrylate	17.23	1.00	20	0	86.2	71	127	17.29	0.330	17	
Ethylbenzene	18.16	1.00	20	0	90.8	72	122	18.45	1.57	16	
Hexachlorobutadiene	15.08	5.00	20	0	75.4	63	129	15.33	1.64	21	
Hexachloroethane	15.66	5.00	20	0	78.3	59	123	15.29	2.36	17	
Iodomethane	20.04	5.00	20	0	100	34	150	21.12	5.26	19	
Isobutyl alcohol	148.6	50.0	200	0	74.3	38	142	154.9	4.14	23	
Isopropylbenzene	18.03	1.00	20	0	90.1	73	124	18.34	1.74	15	
m,p-Xylene	36.36	2.00	40	0	90.9	75	119	36.66	0.816	14	
Methacrylonitrile	166.5	10.0	200	0	83.3	65	119	169.5	1.79	14	
Methyl Acetate	160.0	10.0	200	0	80.0	57	112	165.8	3.55	25	
Methyl Ethyl Ketone	15.75	5.00	20	0	78.7	59	121	16.38	3.93	21	
Methyl methacrylate	17.17	1.00	20	0	85.9	71	121	16.87	1.76	14	
Methylcyclohexane	17.65	1.00	20	0	88.2	70	118	17.82	0.959	12	
Methylene Chloride	16.35	1.00	20	0	81.8	64	121	16.6	1.51	17	
Methyl-tert-butyl ether	17.25	1.00	20	0	86.2	71	123	17.49	1.37	14	
Naphthalene	14.80	5.00	20	0	74.0	48	140	14.68	0.787	33	
n-Butanol	157.1	20.0	200	0	78.6	30	146	150.8	4.09	21	
n-Butylbenzene	17.74	1.00	20	0	88.7	68	131	17.5	1.32	14	
n-Propylbenzene	17.81	1.00	20	0	89.0	72	124	17.9	0.526	15	
o-Xylene	18.10	1.00	20	0	90.5	76	118	18.28	0.973	12	
Pentachloroethane	16.92	2.00	20	0	84.6	70	122	17.06	0.853	14	
p-Isopropyltoluene	17.21	1.00	20	0	86.0	76	114	17.51	1.76	13	
Propionitrile	166.1	10.0	200	0	83.0	59	122	169.7	2.13	22	
sec-Butylbenzene	17.24	1.00	20	0	86.2	73	120	17.4	0.970	13	
Styrene	17.77	1.00	20	0	88.8	78	117	17.69	0.417	12	
tert-Butylbenzene	16.89	1.00	20	0	84.4	73	121	17.1	1.28	17	
Tetrachloroethene	20.30	1.00	20	0	102	67	122	20.51	1.03	16	
Tetrahydrofuran	15.41	5.00	20	0	77.1	44	135	15.45	0.253	21	
Toluene	18.27	1.00	20	0	91.4	75	115	18.21	0.334	13	
Total Xylene	54.46	2.00	60	0	90.8	72	120	54.94	0	18	
trans-1,2-Dichloroethene	16.87	1.00	20	0	84.4	69	118	17.46	3.45	13	

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ANALYTICAL QC SUMMARY REPORT

TestCode: EPA8260_VOA

Sample ID: **G2009676-005FMSD** SampType: **MSD** TestCode: **EPA8260_VO** Units: **µg/L** Prep Date: RunNo: **238427**
Client ID: Batch ID: **R238427** TestNo: **EPA 8260 D** Analysis Date: **9/11/2020** SeqNo: **6046837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	17.86	1.00	20	0	89.3	66	122	18.09	1.26	15	
trans-1,4-Dichloro-2-butene	16.26	2.00	20	0	81.3	46	131	16.18	0.493	17	
Tribromomethane	16.60	1.00	20	0	83.0	65	117	16.34	1.62	14	
Trichloroethene	18.31	1.00	20	0	91.5	75	117	18.62	1.71	11	
Trichlorofluoromethane	17.64	1.00	20	0	88.2	69	125	18.52	4.88	15	
Trichloromethane	16.70	1.00	20	0	83.5	69	117	17.1	2.35	12	
Vinyl Acetate	15.84	1.00	20	0	79.2	46	126	16.31	2.95	11	
Vinyl Chloride	21.33	1.00	20	0	107	54	128	22.11	3.58	15	
Surr: 1,2-Dichloroethane-d4	28.40	0	30	0	94.7	70	130	29.04	0	0	
Surr: 4-Bromofluorobenzene	29.15	0	30	0	97.2	70	130	28.94	0	0	
Surr: Dibromofluoromethane	27.14	0	30	0	90.5	70	130	28.03	0	0	
Surr: Toluene-d8	30.01	0	30	0	100	70	130	30.21	0	0	

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ANALYTICAL QC SUMMARY REPORT

TestCode: HG_7470

Sample ID: **PB-185374**	SampType: **PB**	TestCode: **HG_7470**	Units: **mg/L**	Prep Date: **9/14/2020**	RunNo: **238578**
Client ID:	Batch ID: **185374**	TestNo: **EPA 7470**		Analysis Date: **9/15/2020**	SeqNo: **6052407**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	< 0.000200	0.000200									

Sample ID: **LCS-185374**	SampType: **LCS**	TestCode: **HG_7470**	Units: **mg/L**	Prep Date: **9/14/2020**	RunNo: **238578**
Client ID:	Batch ID: **185374**	TestNo: **EPA 7470**		Analysis Date: **9/15/2020**	SeqNo: **6052409**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.001760	0.000200	0.002	0	88.0	85	115				

Sample ID: **G2009695-001FMS**	SampType: **MS**	TestCode: **HG_7470**	Units: **mg/L**	Prep Date: **9/14/2020**	RunNo: **238578**
Client ID:	Batch ID: **185374**	TestNo: **EPA 7470**		Analysis Date: **9/15/2020**	SeqNo: **6051883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.001910	0.000200	0.002	0	95.5	85	115				

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ANALYTICAL QC SUMMARY REPORT

TestCode: IC_300.0_28

Sample ID: **LFB** SampType: **LFB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	4.848	0.200	5	0	97.0	90	110				
Chloride	47.50	1.00	50	0	95.0	90	110				
Fluoride	5.271	0.100	5	0	105	90	110				
Sulfate	48.52	2.00	50	0	97.0	90	110				

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

Sample ID: **QCS** SampType: **QCS** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	7.820	0.200	8	0	97.8	90	110				
Chloride	23.51	1.00	24	0	97.9	90	110				
Fluoride	4.345	0.100	4	0	109	90	110				
Sulfate	32.16	2.00	32	0	101	90	110				

Sample ID: **HRQC** SampType: **HRQC** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	246.6	1.00	250	0	98.7	90	110				
Sulfate	246.2	2.00	250	0	98.5	90	110				

Sample ID: **G2009686-006CLFM** SampType: **LFM** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	122.8	1.00	15	111.36	76.0	80	120				1

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TestCode: IC_300.0_28

Sample ID: **G2009690-002BLFM** SampType: **LFM** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	34.76	1.00	15	21.841	86.1	80	120				

Sample ID: **LFB** SampType: **LFB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	4.902	0.200	5	0	98.0	90	110				
Chloride	47.56	1.00	50	0	95.1	90	110				
Fluoride	5.355	0.100	5	0	107	90	110				
Sulfate	48.63	2.00	50	0	97.3	90	110				

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

Sample ID: **QCS** SampType: **QCS** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	7.806	0.200	8	0	97.6	90	110				
Chloride	23.47	1.00	24	0	97.8	90	110				
Fluoride	4.354	0.100	4	0	109	90	110				
Sulfate	32.14	2.00	32	0	100	90	110				

Sample ID: **HRQC** SampType: **HRQC** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	246.8	1.00	250	0	98.7	90	110				
Sulfate	246.6	2.00	250	0	98.6	90	110				

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ANALYTICAL QC SUMMARY REPORT

TestCode: IC_300.0_28

Sample ID: **LFB** SampType: **LFB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238634**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	4.902	0.200	5	0	98.0	90	110				
Chloride	47.56	1.00	50	0	95.1	90	110				
Fluoride	5.235	0.100	5	0	105	90	110				
Sulfate	48.63	2.00	50	0	97.3	90	110				

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238634**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

Sample ID: **QCS** SampType: **QCS** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238634**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	7.806	0.200	8	0	97.6	90	110				
Chloride	23.47	1.00	24	0	97.8	90	110				
Fluoride	4.231	0.100	4	0	106	90	110				
Sulfate	32.14	2.00	32	0	100	90	110				

Sample ID: **HRQC** SampType: **HRQC** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238634**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/15/2020** SeqNo: **6054533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	246.8	1.00	250	0	98.7	90	110				
Sulfate	246.6	2.00	250	0	98.6	90	110				

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238634**
Client ID: Batch ID: **185464** TestNo: **EPA 300.0** Analysis Date: **9/16/2020** SeqNo: **6054612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									

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ANALYTICAL QC SUMMARY REPORT

TestCode: IC_300.0_28

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238634**
Client ID: Batch ID: **185464** TestNo: **EPA 300.0** Analysis Date: **9/16/2020** SeqNo: **6054612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

Sample ID: **LRB** SampType: **LRB** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238634**
Client ID: Batch ID: **185464** TestNo: **EPA 300.0** Analysis Date: **9/16/2020** SeqNo: **6054629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	< 0.200	0.200									
Chloride	< 1.00	1.00									
Fluoride	< 0.100	0.100									
Sulfate	< 2.00	2.00									

Sample ID: **G2009686-006CDUP** SampType: **DUP** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	111.3	1.00						111.4	0.0792	20	

Sample ID: **G2009690-002BDUP** SampType: **DUP** TestCode: **IC_300.0_28** Units: **mg/L** Prep Date: **9/14/2020** RunNo: **238628**
Client ID: Batch ID: **185382** TestNo: **EPA 300.0** Analysis Date: **9/14/2020** SeqNo: **6054073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	21.79	1.00						21.84	0.235	20	

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ANALYTICAL QC SUMMARY REPORT

TestCode: ME_3010_6010

Sample ID: **PB-185246** SampType: **PB** TestCode: **ME_3010_601** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238485**
Client ID: Batch ID: **185246** TestNo: **EPA 6010 D** Analysis Date: **9/14/2020** SeqNo: **6048370**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	< 0.100	0.100									
Arsenic	< 0.0200	0.0200									
Barium	< 0.0100	0.0100									
Beryllium	< 0.00100	0.00100									
Boron	< 0.0500	0.0500									
Cadmium	< 0.00200	0.00200									
Calcium	< 0.100	0.100									
Chromium	< 0.0100	0.0100									
Cobalt	< 0.00500	0.00500									
Copper	< 0.0100	0.0100									
Iron	< 0.0500	0.0500									
Lead	< 0.0200	0.0200									
Magnesium	< 0.100	0.100									
Manganese	< 0.0100	0.0100									
Molybdenum	< 0.0200	0.0200									
Nickel	< 0.0100	0.0100									
Potassium	< 0.500	0.500									
Selenium	< 0.0200	0.0200									
Silver	< 0.00500	0.00500									
Sodium	< 0.200	0.200									
Strontium	< 0.0100	0.0100									
Sulfur	< 0.100	0.100									
Thallium	< 0.0200	0.0200									
Tin	< 0.100	0.100									
Titanium	< 0.0100	0.0100									
Vanadium	< 0.00500	0.00500									
Zinc	< 0.0100	0.0100									

Sample ID: **LCS1-185246** SampType: **LCS1** TestCode: **ME_3010_601** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238485**
Client ID: Batch ID: **185246** TestNo: **EPA 6010 D** Analysis Date: **9/14/2020** SeqNo: **6048371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.048	0.100	1	0	105	79.5	120.4				
Arsenic	1.050	0.0200	1	0	105	79.5	120.4				
Barium	1.077	0.0100	1	0	108	79.5	120.4				

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ANALYTICAL QC SUMMARY REPORT

TestCode: ME_3010_6010

Sample ID: **LCS1-185246** SampType: **LCS1** TestCode: **ME_3010_601** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238485**
Client ID: Batch ID: **185246** TestNo: **EPA 6010 D** Analysis Date: **9/14/2020** SeqNo: **6048371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1996	0.00100	0.2	0	99.8	79.5	120.4				
Boron	1.032	0.0500	1	0	103	79.5	120.4				
Cadmium	0.4153	0.00200	0.4	0	104	79.5	120.4				
Calcium	10.49	0.100	10	0	105	79.5	120.4				
Chromium	1.031	0.0100	1	0	103	79.5	120.4				
Cobalt	0.4174	0.00500	0.4	0	104	79.5	120.4				
Copper	1.062	0.0100	1	0	106	79.5	120.4				
Iron	10.39	0.0500	10	0	104	79.5	120.4				
Lead	1.065	0.0200	1	0	106	79.5	120.4				
Magnesium	2.126	0.100	2	0	106	79.5	120.4				
Manganese	1.123	0.0100	1	0	112	79.5	120.4				
Molybdenum	0.4032	0.0200	0.4	0	101	79.5	120.4				
Nickel	1.098	0.0100	1	0	110	79.5	120.4				
Potassium	10.17	0.500	10	0	102	79.5	120.4				
Selenium	1.015	0.0200	1	0	102	79.5	120.4				
Silver	0.009800	0.00500	0.01	0	98.0	79.5	120.4				
Sodium	10.50	0.200	10	0	105	79.5	120.4				
Strontium	1.068	0.0100	1	0	107	79.5	120.4				
Sulfur	20.93	0.100	20	0	105	79.5	120.4				
Thallium	1.057	0.0200	1	0	106	79.5	120.4				
Tin	1.036	0.100	1	0	104	79.5	120.4				
Titanium	1.047	0.0100	1	0	105	79.5	120.4				
Vanadium	0.4183	0.00500	0.4	0	105	79.5	120.4				
Zinc	1.061	0.0100	1	0	106	79.5	120.4				

Sample ID: **G2009674-001EMS** SampType: **MS** TestCode: **ME_3010_601** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238485**
Client ID: Batch ID: **185246** TestNo: **EPA 6010 D** Analysis Date: **9/14/2020** SeqNo: **6048423**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.8662	0.100	1	0	86.6	75	125				
Arsenic	0.8764	0.0200	1	0	87.6	75	125				
Barium	1.180	0.0100	1	0.3609	81.9	75	125				
Beryllium	0.1639	0.00100	0.2	0	81.9	75	125				
Boron	0.8661	0.0500	1	0	86.6	75	125				
Cadmium	0.3402	0.00200	0.4	0	85.0	75	125				

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TestCode: ME_3010_6010

Sample ID: **G2009674-001EMS** SampType: **MS** TestCode: **ME_3010_601** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238485**
Client ID: Batch ID: **185246** TestNo: **EPA 6010 D** Analysis Date: **9/14/2020** SeqNo: **6048423**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.8401	0.0100	1	0	84.0	75	125				
Cobalt	0.3384	0.00500	0.4	0	84.6	75	125				
Copper	0.8589	0.0100	1	0	85.9	75	125				
Iron	8.996	0.0500	10	0.551	84.4	75	125				
Lead	0.8697	0.0200	1	0	87.0	75	125				
Manganese	1.276	0.0100	1	0.4299	84.6	75	125				
Molybdenum	0.3347	0.0200	0.4	0	83.7	75	125				
Nickel	0.8905	0.0100	1	0	89.0	75	125				
Potassium	12.59	0.500	10	4.8966	76.9	75	125				
Selenium	0.8432	0.0200	1	0	84.3	75	125				
Silver	0.008100	0.00500	0.01	0	81.0	75	125				
Sodium	13.31	0.200	10	5.4173	78.9	75	125				
Strontium	1.027	0.0100	1	0.1816	84.6	75	125				
Thallium	0.8646	0.0200	1	0	86.5	75	125				
Tin	0.8648	0.100	1	0	86.5	75	125				
Titanium	0.8603	0.0100	1	0	86.0	75	125				
Vanadium	0.3444	0.00500	0.4	0	86.1	75	125				
Zinc	0.8735	0.0100	1	0	87.4	75	125				

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TestCode: ME_3010_6020

Sample ID: **PB-185247** SampType: **PB** TestCode: **ME_3010_602** Units: **µg/L** Prep Date: **9/11/2020** RunNo: **238518**
Client ID: Batch ID: **185247** TestNo: **EPA 6020 B** Analysis Date: **9/14/2020** SeqNo: **6049291**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	< 1.00	1.00									
Barium	< 5.00	5.00									
Beryllium	< 1.00	1.00									
Cadmium	< 0.200	0.200									
Cobalt	< 0.500	0.500									
Lead	< 1.00	1.00									
Selenium	< 1.00	1.00									
Silver	< 0.200	0.200									
Thallium	< 0.200	0.200									
Uranium	< 1.00	1.00									
Zinc	< 5.00	5.00									

Sample ID: **LCS2-185247** SampType: **LCS2** TestCode: **ME_3010_602** Units: **µg/L** Prep Date: **9/11/2020** RunNo: **238518**
Client ID: Batch ID: **185247** TestNo: **EPA 6020 B** Analysis Date: **9/14/2020** SeqNo: **6049293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	5.603	1.00	6	0	93.4	79.5	120.4				
Barium	46.40	5.00	50	0	92.8	79.5	120.4				
Beryllium	4.322	1.00	4	0	108	79.5	120.4				
Cadmium	4.875	0.200	5	0	97.5	79.5	120.4				
Chromium	48.80	1.00	50	0	97.6	79.5	120.4				
Cobalt	19.24	0.500	20	0	96.2	79.5	120.4				
Copper	48.86	1.00	50	0	97.7	79.5	120.4				
Lead	4.964	1.00	5	0	99.3	79.5	120.4				
Nickel	48.56	0.500	50	0	97.1	79.5	120.4				
Selenium	18.96	1.00	20	0	94.8	79.5	120.4				
Silver	4.975	0.200	5	0	99.5	79.5	120.4				
Thallium	1.911	0.200	2	0	95.6	79.5	120.4				
Uranium	19.01	1.00	20	0	95.1	79.5	120.4				
Zinc	47.04	5.00	50	0	94.1	79.5	120.4				

Sample ID: **PB-185247** SampType: **PB** TestCode: **ME_3010_602** Units: **µg/L** Prep Date: **9/11/2020** RunNo: **238539**
Client ID: Batch ID: **185247** TestNo: **EPA 6020 B** Analysis Date: **9/15/2020** SeqNo: **6050375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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TestCode: ME_3010_6020

Sample ID: **PB-185247** SampType: **PB** TestCode: **ME_3010_602** Units: **µg/L** Prep Date: **9/11/2020** RunNo: **238539**
Client ID: Batch ID: **185247** TestNo: **EPA 6020 B** Analysis Date: **9/15/2020** SeqNo: **6050375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 1.00	1.00									
Copper	< 1.00	1.00									

Sample ID: **LCS2-185247** SampType: **LCS2** TestCode: **ME_3010_602** Units: **µg/L** Prep Date: **9/11/2020** RunNo: **238539**
Client ID: Batch ID: **185247** TestNo: **EPA 6020 B** Analysis Date: **9/15/2020** SeqNo: **6050377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.750	1.00	10	0	97.5	79.5	120.4				
Copper	47.09	1.00	50	0	94.2	79.5	120.4				

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TestCode: NH3_350.1

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064045**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7837	0.100	0.82	0	95.6	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.8404	0.100	0.82	0	102	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7571	0.100	0.82	0	92.3	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7507	0.100	0.82	0	91.6	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064142**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7424	0.100	0.82	0	90.5	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7495	0.100	0.82	0	91.4	90	110				

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TestCode: NH3_350.1

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064229**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7706	0.100	0.82	0	94.0	90	110				

Sample ID: **LCS** SampType: **LCS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064266**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.7400	0.100	0.82	0	90.2	90	110				

Sample ID: **G2009658-006BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.522	0.100	1	0.52864	99.3	90	110				

Sample ID: **G2009659-002BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.672	0.100	1	0.6679	100	90	110				

Sample ID: **G2009670-004BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.9491	0.100	1	0	94.9	90	110				

Sample ID: **G2009654-002BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	2.824	0.100	1	2.046	77.8	90	110				S

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TestCode: NH3_350.1

Sample ID: **G2009676-003AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064113**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.9927	0.100	1	0.053231	93.9	90	110				

Sample ID: **G2009688-004BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: **RHCD06** Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.174	0.100	1	0.25654	91.7	90	110				

Sample ID: **G2009692-002AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.283	0.100	1	0.34548	93.8	90	110				

Sample ID: **G2009699-002BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.9885	0.100	1	0	98.9	90	110				

Sample ID: **G2009705-004CMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.049	0.100	1	0.098071	95.1	90	110				

Sample ID: **G2009708-005CMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.089	0.100	1	0.083011	101	90	110				

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TestCode: NH3_350.1

Sample ID: **G2009684-002AMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064262**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.641	0.100	1	0.62208	102	90	110				

Sample ID: **G2009745-002BMS** SampType: **MS** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.9865	0.100	1	0	98.6	90	110				

Sample ID: **G2009658-006BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.5293	0.100						0.5286	0.120	20	

Sample ID: **G2009659-002BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.6536	0.100						0.6679	2.17	20	

Sample ID: **G2009670-004BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0	0	20	

Sample ID: **G2009654-002BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	1.934	0.100						2.046	5.61	20	

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TestCode: NH3_350.1

Sample ID: **G2009676-003ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0.05323	0	20	

Sample ID: **G2009688-004BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: **RHCD06** Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.2545	0.100						0.2565	0.803	20	

Sample ID: **G2009692-002ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.3714	0.100						0.3455	7.23	20	

Sample ID: **G2009699-002BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064165**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0	0	20	

Sample ID: **G2009705-004CDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064178**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0.09807	0	20	

Sample ID: **G2009708-005CDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0.08301	0	20	

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TestCode: NH3_350.1

Sample ID: **G2009684-002ADUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	0.6205	0.100						0.6221	0.246	20	

Sample ID: **G2009745-002BDUP** SampType: **DUP** TestCode: **NH3_350.1** Units: **mg/L as N** Prep Date: RunNo: **238940**
Client ID: Batch ID: **R238940** TestNo: **EPA 350.1** Analysis Date: **9/22/2020** SeqNo: **6064283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	< 0.100	0.100						0	0	20	

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TestCode: NO3-NO2_353.2

Sample ID: **BLANK-185423** SampType: **PB** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **9/14/2020** RunNo: **238582**
Client ID: Batch ID: **185423** TestNo: **EPA 353.2** Analysis Date: **9/15/2020** SeqNo: **6053699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	< 0.0500	0.0500									

Sample ID: **LCS-185423** SampType: **LCS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **9/14/2020** RunNo: **238582**
Client ID: Batch ID: **185423** TestNo: **EPA 353.2** Analysis Date: **9/15/2020** SeqNo: **6053700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.9560	0.0500	1	0	95.6	90	110				

Sample ID: **G2009677-002BMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **9/14/2020** RunNo: **238582**
Client ID: Batch ID: **185423** TestNo: **EPA 353.2** Analysis Date: **9/15/2020** SeqNo: **6053158**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.9870	0.0500	1	0	98.7	90	110				

Sample ID: **G2009747-001BMS** SampType: **MS** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **9/14/2020** RunNo: **238582**
Client ID: Batch ID: **185423** TestNo: **EPA 353.2** Analysis Date: **9/15/2020** SeqNo: **6053477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	1.255	0.0500	1	0.298	95.7	90	110				

Sample ID: **G2009677-002BDUP** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **9/14/2020** RunNo: **238582**
Client ID: Batch ID: **185423** TestNo: **EPA 353.2** Analysis Date: **9/15/2020** SeqNo: **6053157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	< 0.0500	0.0500						0	0	20	

Sample ID: **G2009747-001BDUP** SampType: **DUP** TestCode: **NO3-NO2_35** Units: **mg/L as N** Prep Date: **9/14/2020** RunNo: **238582**
Client ID: Batch ID: **185423** TestNo: **EPA 353.2** Analysis Date: **9/15/2020** SeqNo: **6053474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate - Nitrite	0.2970	0.0500						0.298	0.336	20	

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TestCode: PH_4500_HB

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6049936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.040	0	7	0	101	98	102				

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.060	0	7	0	101	98	102				

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.070	0	7	0	101	98	102				

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050142**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.060	0	7	0	101	98	102				

Sample ID: **pH LCS 7** SampType: **LCS** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/15/2020** SeqNo: **6050232**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.040	0	7	0	101	98	102				

Sample ID: **G2009696-008ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6049976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	6.770	0						6.76	0.148	20	H

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TestCode: PH_4500_HB

Sample ID: **G2009696-012ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	6.830	0						6.82	0.147	20	H

Sample ID: **G2009686-006ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.560	0						7.5	0.797	20	H

Sample ID: **G2009690-001ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	7.450	0						7.4	0.673	20	H

Sample ID: **G2009695-002ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	12.55	0						12.31	1.93	20	H

Sample ID: **G2009699-007ADUP** SampType: **DUP** TestCode: **PH_4500_HB** Units: **S.U.** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **SM 4500-H+** Analysis Date: **9/14/2020** SeqNo: **6050204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lab pH	8.070	0						8.01	0.746	20	H

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ANALYTICAL QC SUMMARY REPORT

TestCode: TDS_SM 2540-C

Sample ID: **LCS-185320** SampType: **LCS** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185320** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6049024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	288.0	20.0	292	0	98.6	85	115				

Sample ID: **LCS-185321** SampType: **LCS** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185321** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6049025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	284.0	20.0	292	0	97.3	85	115				

Sample ID: **LCS-185321** SampType: **LCS** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185321** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6049135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	286.0	20.0	292	0	97.9	85	115				

Sample ID: **LCS-185501** SampType: **LCS** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238635**
Client ID: Batch ID: **185501** TestNo: **SM 2540 C** Analysis Date: **9/15/2020** SeqNo: **6054645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	284.0	20.0	292	0	97.3	85	115				

Sample ID: **G2008972-005ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185321** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6048825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	2108	20.0						2100	0.380	10	

Sample ID: **G2009673-004ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185320** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6048981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	226.0	20.0						226	0	10	

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TestCode: TDS_SM 2540-C

Sample ID: **G2009676-004CDUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185320** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6048992**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	< 20.0	20.0						0	0	10	

Sample ID: **G2009688-005ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: **FB 1** Batch ID: **185321** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6049004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	< 20.0	20.0						0	0	10	

Sample ID: **G2009696-008ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/11/2020** RunNo: **238505**
Client ID: Batch ID: **185321** TestNo: **SM 2540 C** Analysis Date: **9/11/2020** SeqNo: **6049013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	658.0	20.0						644	2.15	10	

Sample ID: **G2009688-002ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238635**
Client ID: **RHCD04** Batch ID: **185501** TestNo: **SM 2540 C** Analysis Date: **9/15/2020** SeqNo: **6054483**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	72.00	20.0						68	5.71	10	

Sample ID: **G2009696-006ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238635**
Client ID: Batch ID: **185501** TestNo: **SM 2540 C** Analysis Date: **9/15/2020** SeqNo: **6054489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	1522	20.0						1530	0.524	10	

Sample ID: **G2009696-007ADUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238635**
Client ID: Batch ID: **185501** TestNo: **SM 2540 C** Analysis Date: **9/15/2020** SeqNo: **6054494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	1538	20.0						1520	1.18	10	

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TestCode: TDS_SM 2540-C

Sample ID: **G2009855-001FDUP** SampType: **DUP** TestCode: **TDS_SM 254** Units: **mg/L** Prep Date: **9/15/2020** RunNo: **238635**
Client ID: Batch ID: **185501** TestNo: **SM 2540 C** Analysis Date: **9/15/2020** SeqNo: **6054639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total dissolved solids	16700	100						16740	0.239	10	

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ANALYTICAL QC SUMMARY REPORT

TestCode: TURB_EPA 180.1

Sample ID: **G2009688-004DDUP** SampType: **DUP** TestCode: **TURB_EPA 1** Units: **NTU** Prep Date: **9/10/2020** RunNo: **238391**
Client ID: **RHCD06** Batch ID: **185228** TestNo: **EPA 180.1** Analysis Date: **9/10/2020** SeqNo: **6045352**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	4.100	0.10						4.2	2.41	20	

Sample ID: **G2009688-005DDUP** SampType: **DUP** TestCode: **TURB_EPA 1** Units: **NTU** Prep Date: **9/10/2020** RunNo: **238391**
Client ID: **FB 1** Batch ID: **185228** TestNo: **EPA 180.1** Analysis Date: **9/10/2020** SeqNo: **6045356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	< 0.10	0.10						0.05	0	20	

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ANALYTICAL QC SUMMARY REPORT

TestCode: WATER_ALK_D1067

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6049938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	49.00	10.0	47.5	0	103	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6049979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	49.00	10.0	47.5	0	103	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	50.00	10.0	47.5	0	105	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	51.00	10.0	47.5	0	107	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	51.00	10.0	47.5	0	107	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	51.00	10.0	47.5	0	107	85	115				

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TestCode: WATER_ALK_D1067

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	48.00	10.0	47.5	0	101	85	115				

Sample ID: **ALK LCS** SampType: **LCS** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/15/2020** SeqNo: **6050233**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	48.00	10.0	47.5	0	101	85	115				

Sample ID: **G2009696-008ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6049978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	74.00	10.0						75	1.34	20	

Sample ID: **G2009696-012ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	102.0	10.0						100	1.98	20	

Sample ID: **G2009686-006ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	218.0	10.0						217	0.460	20	

Sample ID: **G2009690-001ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	530.0	10.0						523	1.33	20	

CLIENT: WM OF MARYLAND INC. / HRLF
Work Order: G2009688
Project: Hunting Ridge LF 221A

ANALYTICAL QC SUMMARY REPORT

TestCode: WATER_ALK_D1067

Sample ID: **G2009695-002ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	1850	10.0						1920	3.71	20	

Sample ID: **G2009699-007ADUP** SampType: **DUP** TestCode: **WATER_ALK** Units: **mg/L CaCO3** Prep Date: RunNo: **238533**
Client ID: Batch ID: **R238533** TestNo: **ASTM D 1067** Analysis Date: **9/14/2020** SeqNo: **6050205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity to pH 4.5	373.0	10.0						369	1.08	20	

GLOSSARY OF TERMS

Aliquot: A separate measured and representative portion of a sample used for analysis.

Analyte: The specific chemicals or components that a sample is used for analysis.

Acceptance Criteria: Specified limits established either from a method or by the laboratory for a target analyte.

Accuracy: The measured agreement between an observed value and an accepted reference value.

Corporate Detection Limit (CDL): The value based on method detection limits that may encompass multiple studies generated from several instruments. The CDL is based on the highest MDL study and is rounded to a useable value.

Corporate Quantitation Limit (CQL): The laboratory's lowest level of data quantification for reporting a target analyte at a concentration level that does not require use of data qualifiers. The CQL is calculated as two times the Corporate Detection Limit (CDL) or two times the CDL times any dilution factor.

Batch: Samples prepared or analyzed together with the same process and personnel, using the same lot(s) of reagents. A **preparation batch** is a group of one to twenty samples of the same defined matrix, meeting the above-mentioned conditions and with a maximum time between the start of processing of the first and last sample in the batch to be 24 hours. An **analytical batch** is compromised of prepared samples (extracts, digestate or concentrates) that are analyzed together as a group. An analytical batch can include prepared samples originating from various sample matrices and may exceed 20 samples.

Chain of Custody: A form that documents the possession of the samples from the time of collection to lab receipt. This record includes: sample matrix, the number and types of containers; the mode of collection; collector; time of collection; preservation and requested analyses.

Equipment Blank: Sampling equipment rinsed with laboratory water immediately before use in sampling with the rinsing submitted to the laboratory as a sample for analysis. Data from the analysis of equipment blanks provides a check on sampling device cleanliness.

Field Duplicate: Two separate samples taken from the same source (e.g. monitoring well) and analyzed independently. The data obtained from field duplicate samples is used to evaluate the variability of the sampling procedures and the source form which the sample was obtained. There are no acceptance criteria for comparing field duplicate data results.

Laboratory Control Sample (LCS): A sample matrix, free from the analytes of interest, spiked with known amounts of analytes or a material containing known and verified amounts of analytes. It is used to establish intra-laboratory or analyst-specific precision and bias or to assess the performance of a method.

Matrix: The component or substrate that contains the analyte of interest. For purposes of batch and QC requirement determinations, the following matrix distinctions are used:

Aqueous: Any aqueous sample excluded from the definition of Drinking Water matrix or Saline/Estuarine source. Includes surface water, groundwater, effluents and TCLP or other extracts.

Drinking water: Any aqueous sample designated a potable or potential potable water source.

Non-aqueous Liquid: Any organic liquid with < 15% settable solids.

Solids: Includes soils, sediments, sludges and other matrices with > 15% settable solids.

Chemical Waste: A product or by-product of an industrial process that results in a matrix not previously defined.

Matrix Spike (MS): A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. Matrix spikes are used to determine the effect of the matrix on a method's recovery efficiency. Calculation of recovery data is not quality assessed when the concentration of the target analyte in the unspiked sample is greater than or equal to 4x the spiking concentration.

Matrix Spike Duplicate (MSD): A second replicate matrix spike prepared in the laboratory and analyzed to obtain a measure of the precision of the recovery for each analyte. Calculation of recovery data is not required when the concentration of the target analyte in the unspiked sample is greater than or equal to 4x the spiking solution.

Method Detection Limit (MDL): The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in deionized water containing the analyte. MDLs are verified annually and are subject to change.

Preservation: Refrigeration and/or reagents added at the time of sample collection to maintain the chemical and/or biological integrity of the sample.

Recovery: the total amount of the analyte found in the sample divided by the amount of the analyte added into the sample as a spike.

Relative Percent Difference (RPD): The difference between two values divided by the average of the values, expressed as percent. Quality assessment on RPD is not used when at least one of the two values is less than or equal to 5x the reporting limit; assessment between the two values is based on whether the absolute difference is at or within 2x the reporting limit.

Reporting Limit: A data value set by the laboratory based on the CDL and CQL. Any value at or above the CQL requires no qualification. Any reported values required by the client from an analysis that shows non-detect at the CDL is flagged with a "U" qualifier. Any reported value required by the client when an analyte is detected between the CDL and CQL is flagged with a "J" and that reports the result as an estimated value.

Sample: A portion for analysis in a single, or multiple containers with a composition known to the submitter and identified by the lab number to the analyst.

Surrogate: Compounds added to the sample before preparation, then measured after analysis to detect problems in the sample preparation procedure.

TABLE I ON QUALIFIERS (see notes)	
B	Analyte detected in the associated method Blank.
B1	Dilution water blank exceeded method criterion.
C1	CCV recovery above the acceptance limits. Results may be biased high.
C2	CCV recovery below the acceptance limits. Results may be biased low.
C3	ICV recovery above the acceptance limits. Results may be biased high.
C4	ICV recovery below the acceptance limits. Results may be biased low.
C5	Positive values verified by second column confirmation.
C6	Confirmation analysis by another detector or chromatographic column was not performed.
D1	The BOD analysis did not meet the minimum DO depletion of at least 2 mg/L.
D2	The BOD analysis did not meet the minimum residual DO of at least 1 mg/L.
D3	Sample required dilution due to a matrix interference.
D4	Sample was diluted in the extraction steps due to marked matrix interferences.
D5	Sample required dilution due to a chloride interference.
D6	Sample was diluted and the reporting limits were raised to achieve method compliant internal standard recovery.
D7	Sample was digested at a dilution due to the formation of a post-digestion precipitate.
D8	Sample was digested at a dilution to achieve method compliant matrix spike recovery.
D9	Sample was digested at a dilution to meet method compliant digestion criteria.
E	Value above quantitation range.
E2	Unable to obtain a stable weight within specified limits due to sample matrix. Value is estimated.
F1	Fecal sample tested positive for residual chlorine.
H	Method Hold Time exceeded and is not compliant with 40CFR136 Table II.
H1	Due to under-depletion from the initial dilutions for BOD, the sample was reanalyzed outside the hold time.
H2	Due to over-depletion from the initial dilutions for BOD, the sample was reanalyzed outside the hold time.
I1	Internal standard recovery above method acceptance limits. Results are estimated.
I2	Internal standard recovery was below method acceptance limits. Results are estimated.
IP	One of the instrument performance checks ( ) did not meet the acceptance criteria.
J	Indicates an estimated value.
L1	LCS above the acceptance limits. Result may be biased high.
L2	LCS below the acceptance limits. Result may be biased low.
M1	Matrix Spike recovery above the acceptance limits.
M2	Matrix Spike recovery below the acceptance limits.

TABLE I ON QUALIFIERS (see notes)	
M4	The matrix spike failed high for the surrogate.
M5	The matrix spike failed low for the surrogate.
M6	The reporting limits were raised due to sample matrix interference.
ND	Not Detected.
N1	The lab does not hold accreditation from PA-DEP for this parameter by this method
N2	PADEP does not accredit labs for this analyte by this method.
O1	The flashpoint tester cannot detect below 50 degrees F.
O2	Result is temperature of the sample when flame observed. No flash observed. Result qualified.
O3	The reporting limits were raised due to the high concentration of non-target compounds.
O4	Sample was received with headspace.
O5	Sample was received in incorrect container and is not compliant with 40CFR136 Table II.
O6	Insufficient sample volume was received to comply with the method.
P1	The pH of the sample was >2 and is not compliant with 40CFR136 Table II.
P2	Sample contained residual chlorine and is not compliant with 40CFR136 Table II
P3	The pH of the sample was <12 and is not compliant with 40CFR136 Table II.
P4	P4 - Field preservation does not meet EPA or method recommendations for this analysis.
P5	Sample required additional preservative upon receipt.
P6	Field preservation does not meet EPA or method recommendations for this analysis.
P7	Acid preservation may not be appropriate for the analysis of 2-Chloroethyl vinyl ether.
P8	The pH of the sample was >9 and is not compliant with 40CFR136 Table II.
Q1	Qualified Data See Case Narrative.
R1	RPD above control limits between matrix spike and MS duplicates.
R2	RPD above the control limit between duplicates.
R3	RSD above the control limit between replicates.
R4	RPD above control limits between Inorganic Carbon check and spike.
R5	RPD above control limits between LCS and LCSD.
S	Surrogate Spike Recovery outside accepted recovery limits.
S2	Surrogate recovery in the blank was below the control limit.
S3	Surrogate recovery in the blank was above the control limit.
S4	Surrogate recovery in the LCS is above the control limit.
S5	Surrogate recovery in the LCS is below the control limit.
T	Sample temperature received outside the regulatory limit and is not compliant with 40CFR Part136 Table II (for NPW samples).

TABLE I ON QUALIFIERS (see notes)	
T1	Sample temperature received outside the regulatory limit. (Primarily for SCM samples).
T3	Target analyte found in trip/field blank.
TC	The MS tune check (tailing factor) did not meet the acceptance criteria.
U	The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.

Note 1: Other comments to clarify test results may be used. Examples include MCL (Contaminant Limit), and MDA (minimum detectable activity). The Q1 code requires additional qualifier information be described in the Case Narrative.

Note 2: NA is used in the Laboratory QC report as “Not Applicable.”

Form F-5002, 02.20
*** Lab Work Order # G2E09674

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Chain of Custody (COC)

Shuttle/Cooler ID#

Billing Client

Company	Tetra Tech
Mailing Address	980 Awald Rd
City, State, Zip	Annapolis, MD
Name	Andrew Smith
Telephone No.	443-610-3290
E-mail Address	Andrew.Smith2@tetratech.com
Landfill Site	Hunting Ridge
State Sampled	MD
PWS Number	
Date Results Required	

Special Instruction/Project ID/Analyte List/Comment:

*PC-1: Nitric acid (HNO_3)
*PC-2: Hydrochloric acid (HCL)
*PC-3: Sulfuric acid (H_2SO_4)
*PC-4: Sodium Hydroxide (NaOH)
*PC-5: Sodium Thiosulfate ($Na_2S_2O_3$)
*PC-6: Ascorbic acid ($C_6H_8O_6$)
*PC-7: Zinc acetate ($C_4H_6O_4Zn$) / Sodium Hydroxide (NaOH)
*PC-8: Ammonium chloride (NH_4CL)
*PC-9: Copper Sulfate ($CuSO_4 \cdot 5H_2O$)
*PC-I: Ice *PC-N: None *PC-O: Other

SR 1st Review: NV CS 2nd Review: NB

ANALYSIS REQUESTED

Enter 'X' in box below to indicate request and use appropriate preservation code listed to the left

CLIENT SAMPLE ID	Lab Use Only	DATE SAMPLED	TIME (24 hr)	SAMPLE MATRIX	SAMPLE TYPE	Number of Containers	Dissolved Metals Field Filtered: Y/N Preservative*:	Hexavalent Chromium, Dissolved Field Filtered: Y/N Preservative*:	Preservative*:	Preservative*: 8260VOA	Preservative*: Metals	Preservative*: DMetals	Preservative*: Chloride/sulfate/NO3	Preservative*: pH, TSS, TDS	Preservative*: Alk/Carb/Bicarb	Preservative*: Hardness	Preservative*: NH3/COD	Preservative*: TOC	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Cooler (s) Temperature on Receipt 14
RHCU07	001	9/9/20	12:31	GW	Grab					X	X	X	X	X	X	X	X								
RHCD08	002	↓	12:40	↓	↓					X	X	X	X	X	X	X	X								
FB 2	003	↓	12:80	↓	↓					X	X	X	X	X	X	X	X								
T Blank	004																								

Ice present on receipt: Y Yes or X No

Cooler (s) Temperature on Receipt 14

No Solid Ice

Relinquished by: Andrew Smith	Date/Time: 9/9/20 14:00	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received at lab by: Jess Shoemaker	Date/Time: 9/10/20 14:51
Printed Sampler Name: Andrew Smith		Logged in by:	Date/Time:

Sample Matrix: GW Ground Water | ST Storm Water | SW Surface Water | PW Potable Water | WW Wastewater | SO Soil | SL Sludge | C Coal | PO/Quote #:

Sample Type: G Grab | C Composite | D Distribution/DW | E Entry Point/DW | R Raw/DW | S Special/DW | O Other | nHZ Not Hazardous / HZ Hazardous

Please return completed form and samples to **Geochemical Testing • 2005 N Center Ave • Somerset, PA • 15501** • 814-443-1671 • (Fax: 814-445-6729)

SAMPLES MUST BE PRESERVED ON ICE.

Form F-5002, 02.20
*** Lab Work Order # G2009688

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Chain of Custody (COC)

Shuttle/Cooler ID#

Billing Client

Company: Tetra Tech	Name: Andrew Smith	E-mail Address: andrew.smith2@tetratech.com
Mailing Address: 980 Awald Rd	Telephone No.: 443-610-3290	Landfill Site: Hunting Ridge
City, State, Zip: Annapolis, MD	State Sampled: MD / PWS Number:	Date Results Required:

Special Instruction/Project ID/Analyte List/Comment:

*PC-1: Nitric acid (HNO_3)
*PC-2: Hydrochloric acid (HCL)
*PC-3: Sulfuric acid (H_2SO_4)
*PC-4: Sodium Hydroxide (NaOH)
*PC-5: Sodium Thiosulfate ($Na_2S_2O_3$)
*PC-6: Ascorbic acid ($C_6H_8O_6$)
*PC-7: Zinc acetate ($C_4H_6O_4Zn$) / Sodium Hydroxide (NaOH)
*PC-8: Ammonium chloride (NH_4CL)
*PC-9: Copper Sulfate ($CuSO_4 \cdot 5H_2O$)
*PC-I: Ice *PC-N: None *PC-O: Other

SR 1st Review: MF CS 2nd Review: NB

ANALYSIS REQUESTED
Enter 'X' in box below to indicate request and use appropriate preservation code listed to the left

CLIENT SAMPLE ID	Lab Use Only	DATE SAMPLED	TIME (24 hr)	SAMPLE MATRIX	SAMPLE TYPE	Number of Containers	Dissolved Metals Field Filtered: Y/N Preservative*:	Hexavalent Chromium, Dissolved Field Filtered: Y/N Preservative*:	Preservative*: 8260 VOA	Preservative*: T-Metals	Preservative*: DMetals	Preservative*: Chloride/Sulfate/Nit/pH, TSS, TDS	Preservative*: Alk/Carb/Bicarb	Preservative*: Hardness	Preservative*: NH3/COD	Preservative*: TOC	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Preservative*:	Cooler (s) Temperature on Receipt 4
WHC D03	001	9/9/20	9:38	GW	Grab	13			X	X	X	X	X	X	X	X								
RHC D04	002	↓	10:20	↓	↓	13			X	X	X	X	X	X	X	X								
RHC D05	003	↓	10:52	↓	↓	13			X	X	X	X	X	X	X	X								
RHC D06	004	↓	11:40	↓	↓	13			X	X	X	X	X	X	X	X								
FB1	005	↓	11:55	↓	↓	13			X	X	X	X	X	X	X	X								

Ice present on receipt: X Yes or ___ No

Relinquished by: [signature]	Date/Time: 9/9/20 14:00	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received at lab by:	Date/Time:
Printed Sampler Name: AS		Logged in by: [signature]	Date/Time: 9-10-20 1710

Sample Matrix: GW Ground Water | ST Storm Water | SW Surface Water | PW Potable Water | WW Wastewater | SO Soil | SL Sludge | C Coal | PO/Quote #:

Sample Type: G Grab | C Composite | D Distribution/DW | E Entry Point/DW | R Raw/DW | S Special/DW | O Other | nHZ Not Hazardous / HZ Hazardous

Please return completed form and samples to **Geochemical Testing • 2005 N Center Ave • Somerset, PA • 15501** • 814-443-1671 • (Fax: 814-445-6729)

SAMPLES MUST BE PRESERVED ON ICE.

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCU07 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 6200916.74

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N — Filter Device: Y or N ? 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other:

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) ____ (ft/msl) — Depth to Water (DTW) (from TOC) ____ (ft) — Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft) — Stick Up (from ground elevation) ____ (ft) — Casing ID ____ (in) — Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
090920	6.76	1.13	23.3	9.86	9.2	186.0	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Clear — Odor: odorless — Color: Colorless — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 — Outlook: 80° overcast — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Surface sample taken @ 12:31

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD08 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G20091174

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N — Filter Device: Y or N — 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Filter Type:

X-Other:

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl) — Depth to Water (DTW) (from TOC) ____ (ft) — Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft) — Stick Up (from ground elevation) ____ (ft) — Casing ID ____ (in) — Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st							
	2nd							
	3rd							
	4th							
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
09 09 20	6.88	.115	23.1	32	9.9	183.0	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Clear — Odor: odorless — Color: colorless — Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 — Outlook: 80° overcast — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required): ____

FIELD COMMENTS

Surface sample taken @ 12:40

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: WHCD03 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2009688

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
09 09 20	925	113	116	50	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment: Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or _____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

X-Other:

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): 3045 (ft/msl)

Depth to Water (DTW) (from TOC): 103.8 (ft)

Groundwater Elevation (site datum, from TOC): 2097 (ft/msl)

Total Well Depth (from TOC): 2010 (ft)

Stick Up (from ground elevation): 3.0 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
9:28	4	1st 4.97	1st .093	19.7	28.2	1.19	365.0	104
9:31	1	2nd 4.79	2nd .044	17.1	169.0	1.16	368.0	12.11
9:33	2	3rd 4.73	3rd 1.041	15.7	10.6	1.17	337.0	12.3
9:35	3	4th 4.57	4th .041	16.5	0.0	10.5	384.6	12.5
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____
09 09 20	4.56	.041	16.4	0.0	10.3	388.0	12.5

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: Odorless Color: Colorless Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 Outlook: 80s Rain Precipitation (Y) or N

Specific Comments (including purge/well volume calculations if required):

20.10 - 10.38 = 9.72 · 0.163 = 1.58 · 3 = 4.75

sampled @ 9:38

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	Andrew J. Smith	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 6898 Sample Point: RHCD04 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2009698

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
09 09 20	1307	13	1.18	60	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC): 3604 (ft/msl)

Depth to Water (DTW) (from TOC): 1884 (ft)

Groundwater Elevation (site datum, from TOC): 1663 (ft/msl)

Total Well Depth (from TOC): 3000 (ft)

Stick Up (from ground elevation): 3.0 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1010	w	1st 4.47	1st .074	14.3	3830	2.5	3890	22.73
1011	1	2nd 4.18	2nd .076	14.3	2020	2.1	4150	22.75
1016	2	3rd 4.33	3rd 1.077	14.1	5570	1.7	4460	23.35
1018	3	4th 3.95	4th .073	14.1	10000	2.2	4630	24.17
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units
09 09 20	3.92	.073	14.1	7890	2.1	4680	24.38

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Cloudy muddy Odor: odorless Color: tan Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE/10 Outlook: 80° overcast Precipitation: (Y) or N

Specific Comments (including purge/well volume calculations if required):

30.00 − 18.84 = 11.16 · 0.163 = 1.82 · 3 = 5.46

Sampled @ 10:20

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
09.09.20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD05 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2009688

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
090920	1040	12	24	80	30

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Device: Y or N — 0.45 µ or ____ µ (circle or fill in)

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC): 3909 (ft/msl)

Depth to Water (DTW) (from TOC): 2142 (ft)

Groundwater Elevation (site datum, from TOC): ____ (ft/msl)

Total Well Depth (from TOC): 3600 (ft)

Stick Up (from ground elevation): 300 (ft)

Casing ID: 2 (in)

Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
10:44	1st	4.99	-.142	15.0	42	2.10	4630	216
10:46	2nd	4.83	-.154	14.9	11	3.35	4880	216
10:48	3rd	4.93	-.157	14.9	00	4.32	4850	216
10:50	4th	4.72	-.158	14.9	00	4.50	4770	216
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
090920	459	0.158	149	30	46	479	21.64

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear — Odor: Odorless — Color: Colorless — Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE / 10 — Outlook: 80° Rain — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

36.00 − 21.42 = 14.58 · 0.163 = 2.38 · 3 = 7.14

sampled @ 10:52

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
09/09/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Hunting Ridge LF

Site No.: 0898 Sample Point: RHCD06 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: G2009688

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hr:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
09 09 20	11 16	24	10.45	30	3D

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or (N)

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Purging Device: A — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: A

X-Other:

Filter Type: N/A — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: D — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) 22.53 (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) 38.53 (ft)

Stick Up (from ground elevation) 1.90 (ft)

Casing ID 2 (in)

Casing Material PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
11:19	~ 1st	5.91 1st	0.213 1st	15.5	0.80	0.0	190.0	22.7
11:24	1 2nd	5.80 2nd	0.236 2nd	15.5	1.02	0.0	54.0	22.7
11:30	2 3rd	6.13 3rd	0.250 3rd	15.4	9.3	0.0	14.0	22.7
11:37	3 4th	6.28 4th	0.255 4th	15.4	9.8	0.0	5.0	22.7
:								
:								
:								
:								
:								
:								
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	–	–	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
09 09 20	6.21	0.253	15.4	7.6	0.0	60	22.77

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear

Odor: odorless

Color: colorless

Other:

Weather Conditions (required daily, or as conditions change):

Direction/Speed: NE/10

Outlook: 50° overcast

Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

38.53 − 22.53 = 16.00 · 0.653 = 10.45 · 3 = 31.35

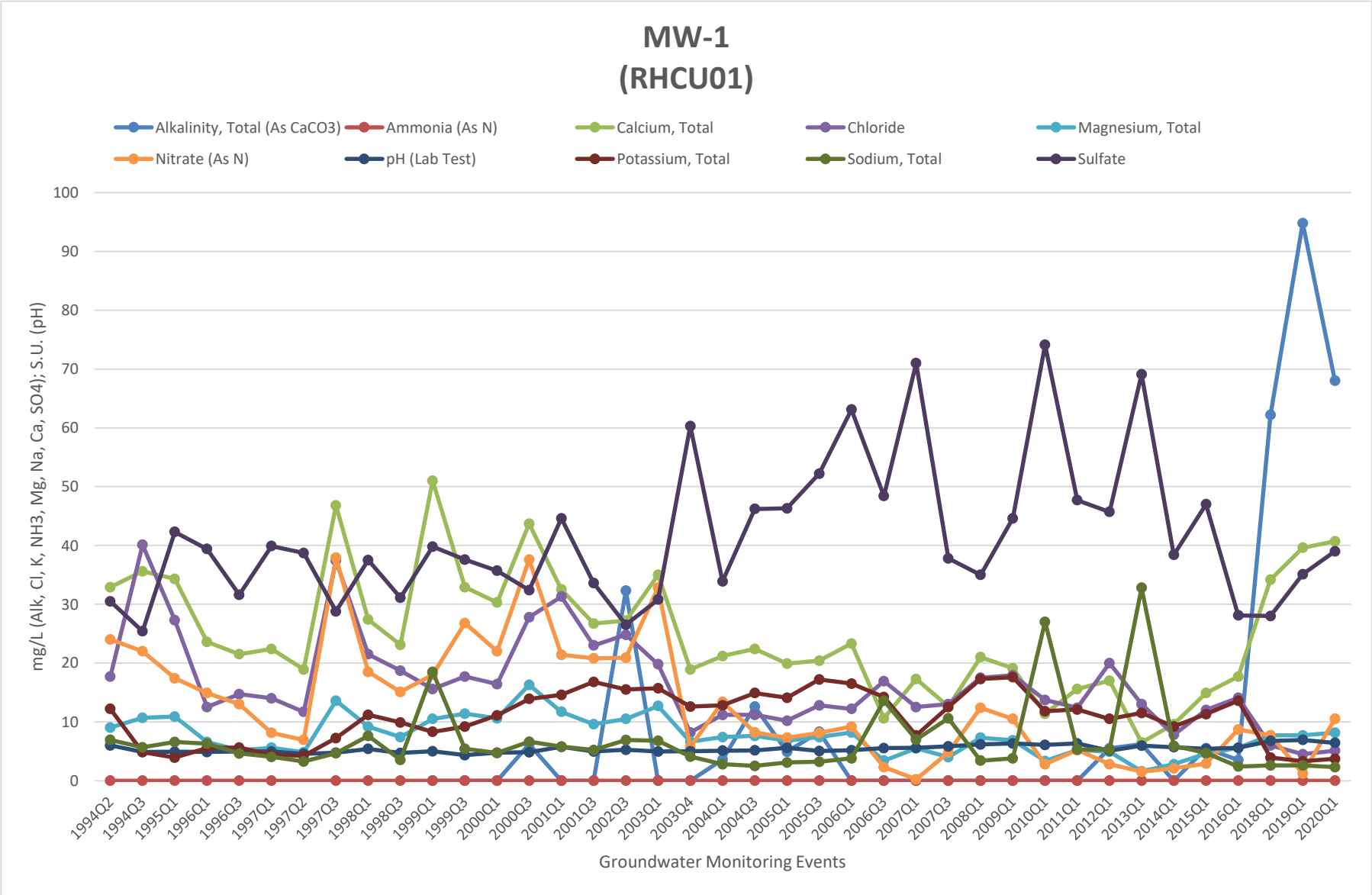
Sampled @ 11:48

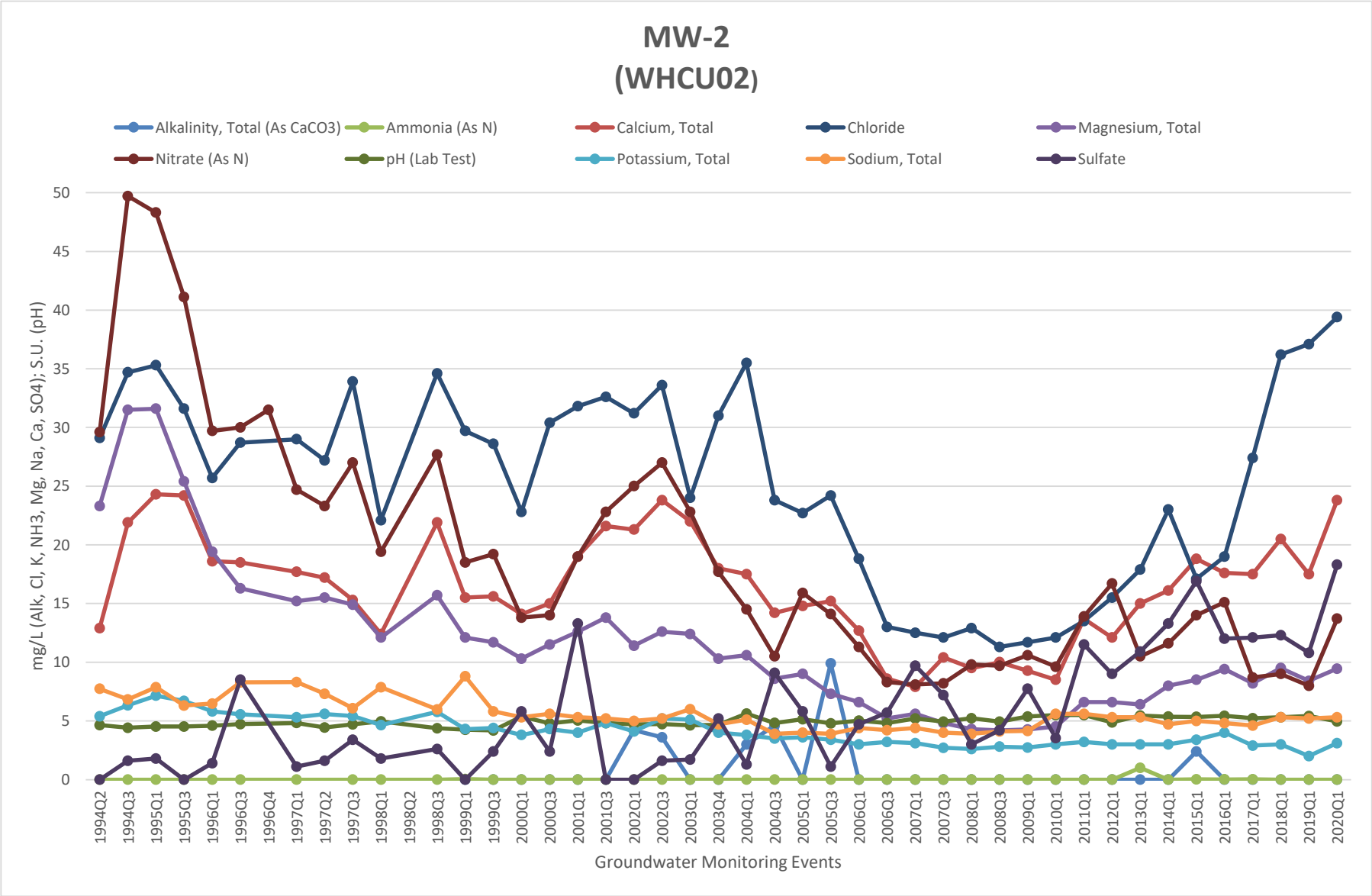
I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
9/9/20	Andrew Smith	[signature]	Tetra Tech

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

APPENDIX D – TIME SERIES GRAPHS


MW-1
(RHCU01)
Alkalinity, Total (As CaCO3)
Ammonia (As N)
Calcium, Total
Chloride
Magnesium, Total
Nitrate (As N)
pH (Lab Test)
Potassium, Total
Sodium, Total
Sulfate
mg/L (Alk, Cl, K, NH3, Mg, Na, Ca, SO4); S.U. (pH)
100
90
80
70
60
50
40
30
20
10
0
1994Q2
1994Q3
1995Q1
1996Q1
1996Q3
1997Q1
1997Q2
1997Q3
1998Q1
1998Q3
1999Q1
1999Q3
2000Q1
2000Q3
2001Q1
2001Q3
2002Q3
2003Q1
2003Q4
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
2015Q1
2016Q1
2018Q1
2019Q1
2020Q1
Groundwater Monitoring Events


MW-2
(WHCU02)
Alkalinity, Total (As CaCO3)
Ammonia (As N)
Calcium, Total
Chloride
Magnesium, Total
Nitrate (As N)
pH (Lab Test)
Potassium, Total
Sodium, Total
Sulfate
mg/L (Alk, Cl, K, NH3, Mg, Na, Ca, SO4); S.U. (pH)
50
45
40
35
30
25
20
15
10
5
0
1994Q2
1994Q3
1995Q1
1995Q3
1996Q1
1996Q3
1996Q4
1997Q1
1997Q2
1997Q3
1998Q1
1998Q2
1998Q3
1999Q1
1999Q3
2000Q1
2000Q3
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q4
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2010Q1
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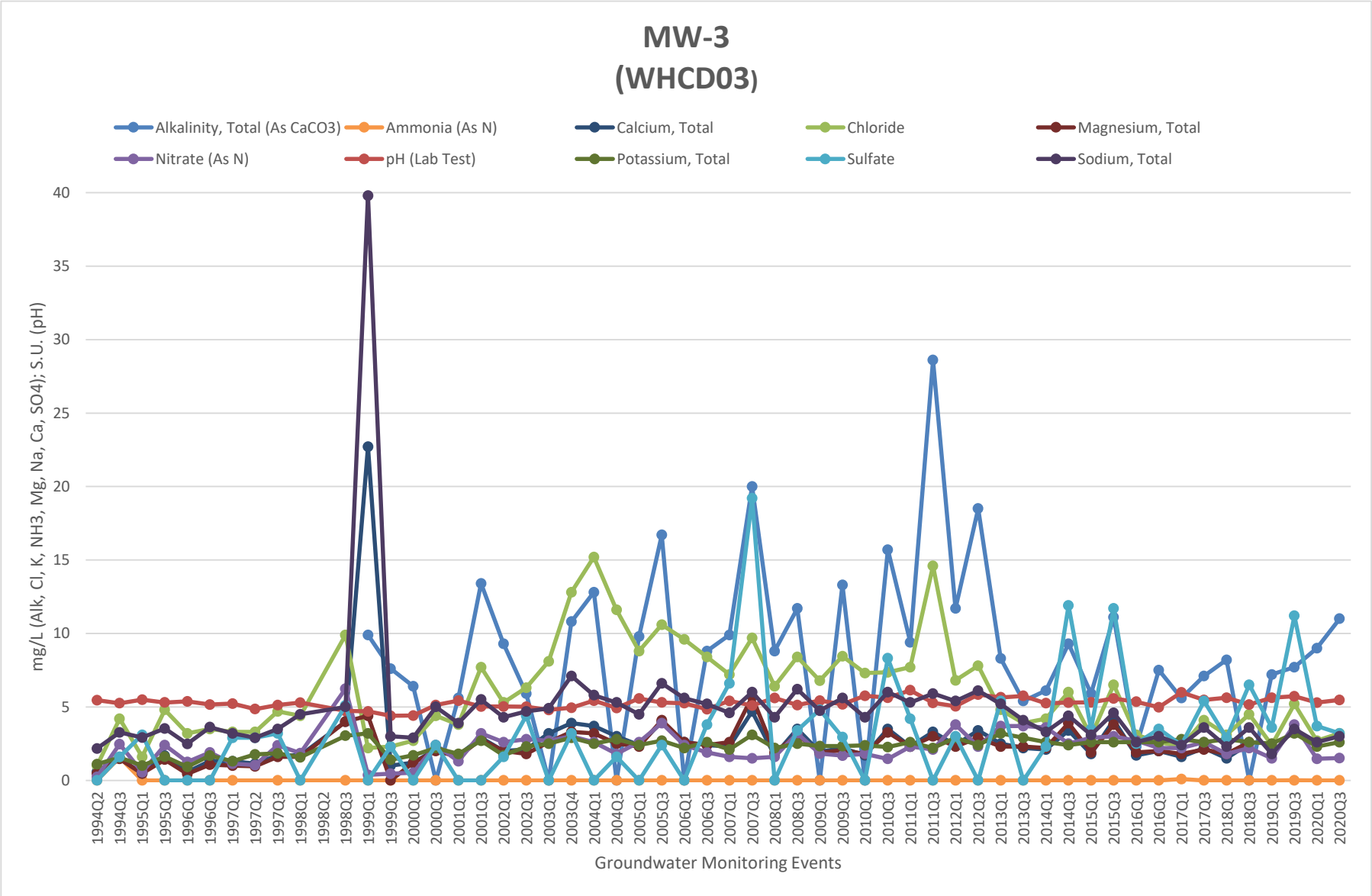
2018Q1
2019Q1
2020Q1
Groundwater Monitoring Events


MW-3
(WHCD03)
Alkalinity, Total (As CaCO3)
Ammonia (As N)
Calcium, Total
Chloride
Magnesium, Total
Nitrate (As N)
pH (Lab Test)
Potassium, Total
Sulfate
Sodium, Total
mg/L (Alk, Cl, K, NH3, Mg, Na, Ca, SO4); S.U. (pH)
40
35
30
25
20
15
10
5
0
1994Q2
1994Q3
1995Q1
1995Q3
1996Q1
1996Q3
1997Q1
1997Q2
1997Q3
1998Q1
1998Q2
1998Q3
1999Q1
1999Q3
2000Q1
2000Q3
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q4
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
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2007Q3
2008Q1
2008Q3
2009Q1
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2010Q1
2010Q3
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2014Q3
2015Q1
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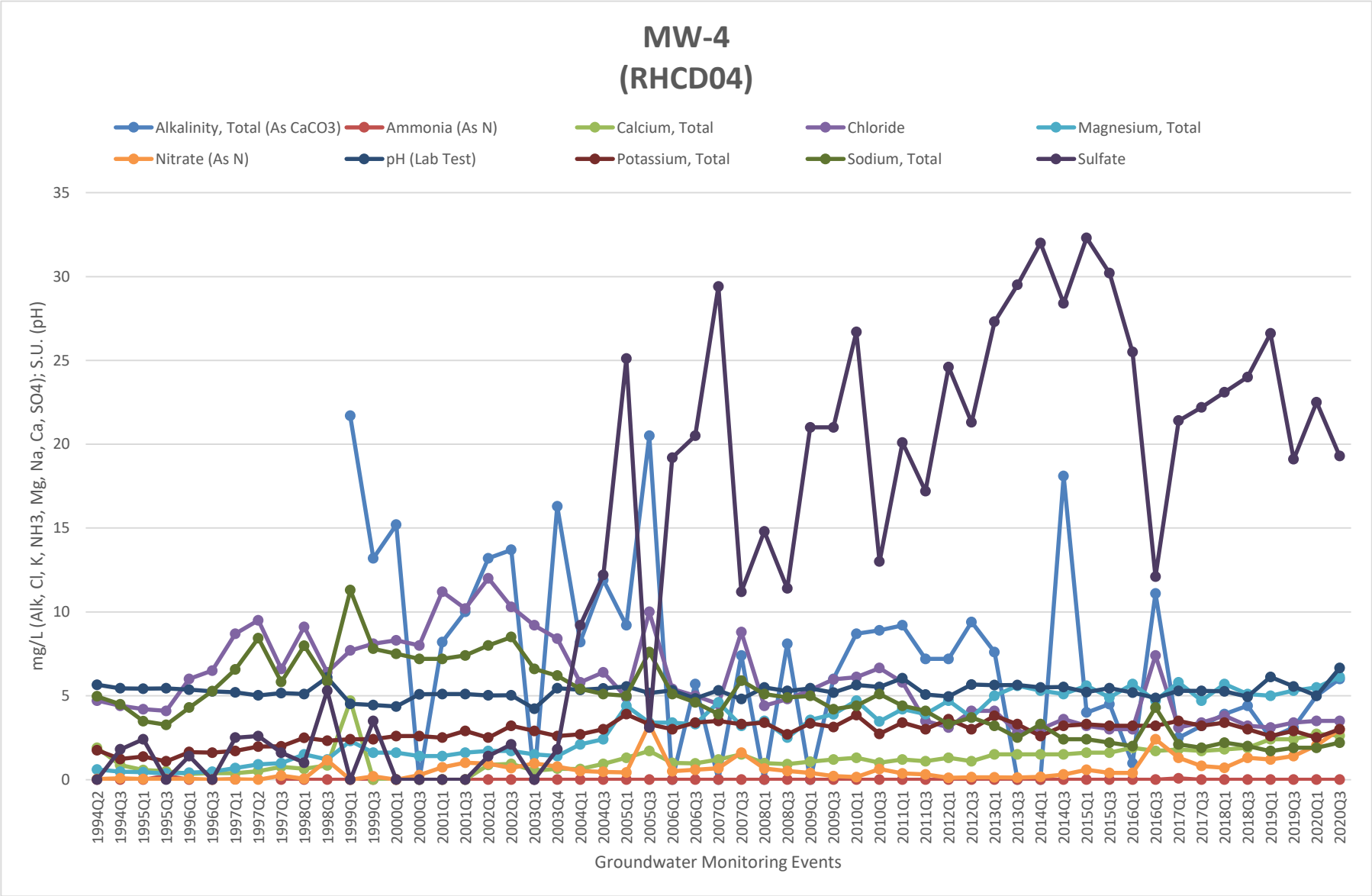
2020Q1
2020Q3
Groundwater Monitoring Events


MW-4
(RHCD04)
Alkalinity, Total (As CaCO3)
Ammonia (As N)
Calcium, Total
Chloride
Magnesium, Total
Nitrate (As N)
pH (Lab Test)
Potassium, Total
Sodium, Total
Sulfate
mg/L (Alk, Cl, K, NH3, Mg, Na, Ca, SO4); S.U. (pH)
35
30
25
20
15
10
5
0
1994Q2
1994Q3
1995Q1
1995Q3
1996Q1
1996Q3
1997Q1
1997Q2
1997Q3
1998Q1
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1999Q1
1999Q3
2000Q1
2000Q3
2001Q1
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2002Q1
2002Q3
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2003Q4
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2004Q3
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2005Q3
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2006Q3
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2007Q3
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2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
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2014Q1
2014Q3
2015Q1
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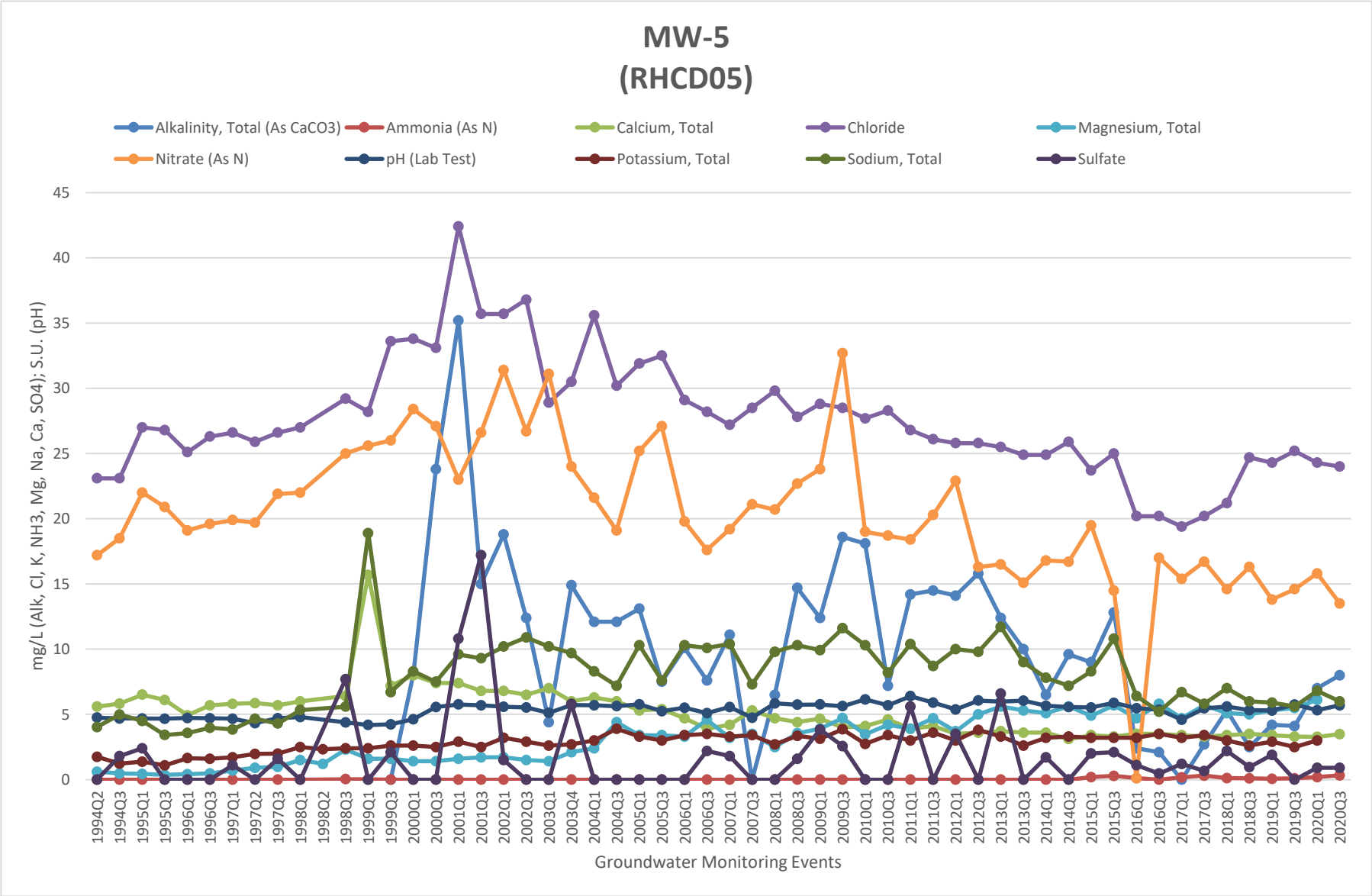
2020Q1
2020Q3
Groundwater Monitoring Events


MW-5
(RHCD05)
Alkalinity, Total (As CaCO3)
Ammonia (As N)
Calcium, Total
Chloride
Magnesium, Total
Nitrate (As N)
pH (Lab Test)
Potassium, Total
Sodium, Total
Sulfate
mg/L (Alk, Cl, K, NH3, Mg, Na, Ca, SO4); S.U. (pH)
45
40
35
30
25
20
15
10
5
0
1994Q2
1994Q3
1995Q1
1995Q3
1996Q1
1996Q3
1997Q1
1997Q2
1997Q3
1998Q1
1998Q2
1998Q3
1999Q1
1999Q3
2000Q1
2000Q3
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q4
2004Q1
2004Q3
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2005Q3
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2015Q1
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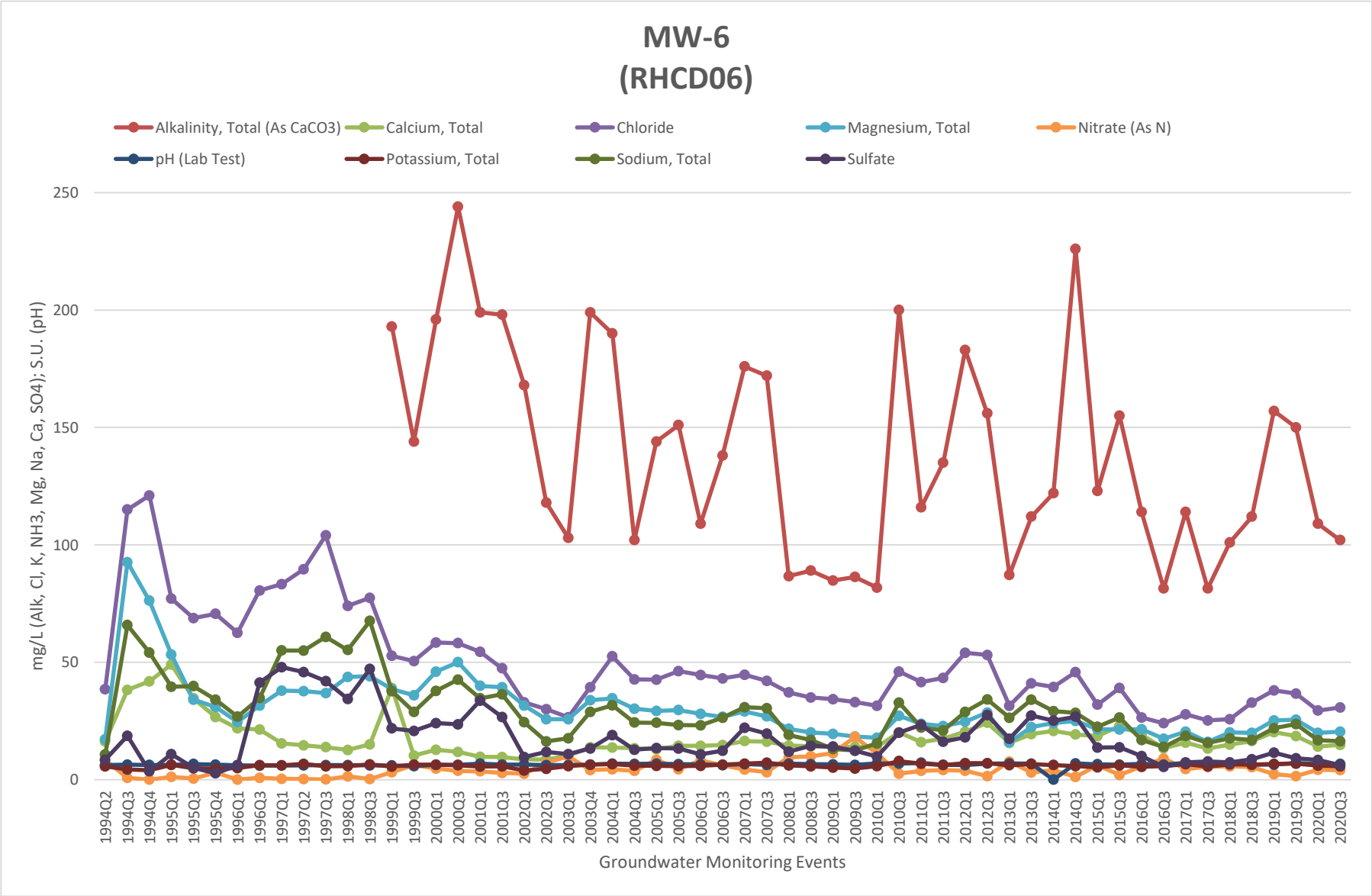
2020Q1
2020Q3
Groundwater Monitoring Events


MW-6
(RHCD06)
Alkalinity, Total (As CaCO3)
Calcium, Total
Chloride
Magnesium, Total
Nitrate (As N)
pH (Lab Test)
Potassium, Total
Sodium, Total
Sulfate
mg/L (Alk, Cl, K, NH3, Mg, Na, Ca, SO4); S.U. (pH)
250
200
150
100
50
0
1994Q2
1994Q3
1994Q4
1995Q1
1995Q3
1995Q4
1996Q1
1996Q3
1997Q1
1997Q2
1997Q3
1998Q1
1998Q3
1999Q1
1999Q3
2000Q1
2000Q3
2001Q1
2001Q3
2002Q1
2002Q3
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2020Q1
2020Q3
Groundwater Monitoring Events

APPENDIX E – HISTORICAL GROUNDWATER RESULTS

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-1 (RHCU01)

Hunting Ridge Construction and Demolition Debris Landfill, Hurlock, Maryland

ANALYTE	UNITS	1994Q2	1994Q3	1995Q1	1996Q1	1996Q3	1997Q1	1997Q2	1997Q3	1998Q1	1998Q3	1999Q1	1999Q3	2000Q1	2000Q3	2001Q1	2001Q3	2002Q3	2003Q1	2003Q4	2004Q1	2004Q3	2005Q1	2005Q3	2006Q1	2006Q3	2007Q1	2007Q3
Water Quality																												
Water Elevation	Feet																				26.15	24.85	25.23	26.06		26.95	26.13	23.35
Electrical Conductance (Field)	UMHOS/CM																	357	364	247	227	249	196	257	247	174	165	224
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	361	370	332	300	246	231	207	538	322	270	297	374	354	519	395	326	355	368	221	265	236	246	273	245	213	211	194
pH (Field)	S.U.																	4.84	4.84	5.23	4.85	4.93	5.09	5.07	4.87	5.56	5.37	5.36
pH (Lab Test)	S.U.	6.01	4.89	4.92	4.87	4.95	4.97	4.56	4.75	5.39	4.72	5.01	4.34	4.76	4.83	5.73	4.95	5.26	4.97	5	5.1	5.14	5.57	5.03	5.16	5.52	5.58	5.84
Turbidity (Field)	N.T.U.																	5.8	5.4	28.3	4.3	2.86	6.7	7.1	4.7	2.86	2.86	30.1
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/											ND	ND	ND	6.2	ND	ND											
Alkalinity, Total (As CaCO3)	MGCACO3/											ND	ND	ND	6.2	ND	ND	32.3	ND	ND	3.6	12.6	4.9	8.3	ND	ND	ND	ND
Alkalinity, Carbonate (As CaCO3)	MGCACO3/	11	1	ND	1.5	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND											
Anion/Cation Balance	MG/L											0	0	0	0	0	0											
Chemical Oxygen Demand (COD)	MG/L	10	ND	ND	ND	22	ND		ND	11	ND	ND	10.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.7	17.5
Chloride	MG/L	17.7	40.1	27.3	12.5	14.7	14	11.7	37.4	21.5	18.7	15.6	17.7	16.4	27.8	31.3	23	24.8	19.8	8.2	11.2	11.2	10.2	12.8	12.2	16.9	12.5	13
Nitrate (As N)	MG/L	24	22	17.4	14.9	13	8.13	6.93	37.9	18.5	15.1	18	26.8	22	37.6	21.4	20.8	20.9	32.8	5.7	13.4	8.2	7.3	8.1	9.2	2.3	0.23	4.8
Sulfate	MG/L	30.5	25.4	42.3	39.4	31.6	39.9	38.7	28.8	37.5	31.1	39.8	37.6	35.7	32.4	44.6	33.6	26.5	30.8	60.3	33.9	46.2	46.3	52.2	63.1	48.4	71	37.8
Total Hardness (As CaCO3)	MG/L	133	151	131	94.4	85.1	79.1		173	106	88.1	173	130	127	168	123	106	108	139	123	116	200	80	85.1	81.9	33.9	54.6	44
Total Dissolved Solids (TDS)	MG/L																	262	283	187	182	186	180	189	163	197	170	187
Total Organic Carbon	MG/L																											
Total Organic Halogen (TOX)	MG/L	8	ND	ND	10	ND	ND		ND	ND	10	ND	43.6	ND	ND	10.1	ND											
Metals																												
Antimony, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND		0.0011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Dissolved	MG/L	0.0007	ND	ND	ND	ND																						
Barium, Total	MG/L	0.0825	0.138	0.0952	0.0845	0.091	0.0868		0.175	0.109	0.155	0.15	0.12	0.11	0.16	0.13	0.11	0.067	0.099	0.068	0.065	0.064	0.057	0.057	0.067	0.037	0.051	0.047
Barium, Dissolved	MG/L	0.0778	0.156	0.099	0.0819	0.088																						
Beryllium, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L	ND	ND	ND	ND	ND																						
Calcium, Total	MG/L	32.9	35.6	34.3	23.6	21.5	22.4	18.9	46.8	27.4	23.1	51	32.9	30.3	43.7	32.5	26.7	27.2	35	18.9	21.2	22.4	19.9	20.4	23.3	10.6	17.3	12.6
Calcium, Dissolved	MG/L	36.3	39.9	34.4	22.4	23.1	22.4	21.2	52.3	26.6	22.6	26.3	34.2	29.4	43.1	32.8	27											
Cobalt, Total	MG/L																	0.01	0.013	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																											
Chromium, Total	MG/L	ND	7.7	ND	ND	ND	ND		ND	ND	ND	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L	ND	ND	ND	ND	ND																						
Iron, Total	MG/L						1.33	0.11	0.364	0.121	0.402	0.16	ND	0.11	ND	ND	0.16	0.22	0.14	0.58	0.28	0.08	0.42	0.31	0.32	0.38	2.1	0.89
Iron, Dissolved	MG/L	ND	ND	ND	ND	ND																						
Lead, Total	MG/L	0.0012	0.0009	ND	ND	ND	0.0014		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0021	ND
Lead, Dissolved	MG/L	ND	ND	ND	ND	ND																						
Magnesium, Total	MG/L	9.01	10.7	10.9	6.59	5.15	5.6	4.82	13.6	9.2	7.4	10.5	11.4	10.6	16.3	11.7	9.6	10.5	12.7	6.6	7.4	7.6	6.8	7.4	8.2	3.4	5.5	4
Magnesium, Dissolved	MG/L	10.3	12.4	11	6.53	6.6	5.62	5.63	15.6	9.18	7.92	8.9	11.8	11	16	11.8	10											
Manganese, Total	MG/L						0.225	0.178	0.437	0.328	0.306	0.32	0.33	0.32	0.44	0.36	0.3	0.31	0.37	0.21	0.25	0.28	0.25	0.22	0.24	ND	0.2	ND
Manganese, Dissolved	MG/L	0.494	0.347	0.296	0.321	0.266																						
Mercury, Total	MG/L	ND	0.00012	0.00009	ND	ND	0.00011		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0005	0.0004	ND
Mercury, Dissolved	MG/L	0.00007	0.00009	0.00009	ND	ND																						
Nickel, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	12.2	4.85	3.93	5.53	5.63	4.4	4.23	7.24	11.2	9.88	8.3	9.2	11.1	13.9	14.6	16.8	15.5	15.7	12.6	12.8	14.9	14.1	17.2	16.5	14.2	7.7	12.5
Potassium, Dissolved	MG/L	11	4.41	4.04	4.67	5.12	2.6	3.98	9.09	9.49	9.51	8.2	10.7	10.9	14.8	15.6	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Dissolved	MG/L	7.58	6.87	6.36	5.53	4.32	3.63	3.88	5.36	7.64	3.49	3.9	6	5.3	6	6.1	5.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	MG/L	6.93	5.66	6.57	6.29	4.62	4.05	3.24	4.67	7.61	3.55	18.5	5.4	4.7	6.6	5.8	5.2	6.9	6.8	4.1	2.8	2.5	3.1	3.2	3.8	13.6	7	10.6
Silver, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Dissolved	MG/L																											
Thallium, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	MG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	MG/L	0.0044	ND	ND	ND	ND	ND		ND	ND	0.0223	0.035	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Dissolved	MG/L	0.0064	0.013	0.004	ND	ND																						
Calcium and Magnesium Hardness	MG/L											170	134	119	173	130	108											
VOCs																												
1,1,1,2-Tetrachloroethane	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	0.2	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L																											
1,2-Dibromo-3-Chloropropane DBCP	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																											
1,3-Dichloropropene	UG/L	ND	ND	ND																								
1,4-Dichlorobenzene	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	2	2	2	2	2	2		2	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	UG/L																	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L	14	1	1	1	2	2		2	2	2	ND	ND	ND	ND	ND	ND											
Acrylonitrile	UG/L	10	2	2	2	2	2		2	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L																											
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L				ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																											
Diethyl ether	UG/L							ND																				
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																	ND	ND	ND	ND	ND						
Methyl Tert-Butyl ether	UG/L																						ND	ND	ND	ND	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L							ND																				
Styrene	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L							ND																				
Toluene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																											
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L				ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L																	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-1 (RHCU01)

Hunting Ridge Construction and Demolition Debris Landf

ANALYTE	UNITS	2008Q1	2009Q1	2010Q1	2011Q1	2012Q1	2013Q1	2014Q1	2015Q1	2016Q1	2018Q1	2019Q1	2020Q1
Water Quality													
Water Elevation	Feet	23.34	23.44	27.54	23.53	25.01			26.06				17.32
Electrical Conductance (Field)	UMHOS/CM	186	167	266	207	229	250	211	192	166	237	218	249
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	261	224					153	208	217	266	292	300
pH (Field)	S.U.	5.57	5.5	5.36	4.54	4.71	5.3	4.62	5.56	4.98	6.36	6.73	6.00
pH (Lab Test)	S.U.	6.15	6.32	6.07	6.34	5.1	5.97	5.68	5.40	5.56	6.76	6.93	6.43
Turbidity (Field)	N.T.U.	26.9	92.3	79	20	1.4	135	14.9	78.8	10.2	11.3	106	367
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/												
Alkalinity, Total (As CaCO3)	MGCACO3/	ND	ND	ND	ND	5.5	6.2	ND	5.5	3.5	62.2	94.8	68
Alkalinity, Carbonate (As CaCO3)	MGCACO3/												
Anion/Cation Balance	MG/L												
Chemical Oxygen Demand (COD)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8
Chloride	MG/L	17.5	17.9	13.7	12.4	20	13	7.8	12.0	14.1	6.0	4.5	5.1
Nitrate (As N)	MG/L	12.4	10.5	2.8	5.2	2.8	1.5	2.1	2.9	8.7	7.7	1.2	10.5
Sulfate	MG/L	35	44.6	74.1	47.7	45.7	69.1	38.4	47.0	28.1	28.0	35.1	39.0
Total Hardness (As CaCO3)	MG/L	74.3	75.2	36	60	62	20	38	64	68	108	124	135
Total Dissolved Solids (TDS)	MG/L	168	238	140	186	148	184	134	127	156	134	181	192
Total Organic Carbon	MG/L												
Total Organic Halogen (TOX)	MG/L												
Metals													
Antimony, Total	MG/L	ND	ND										
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	0.00033	ND	ND	0.00038	ND
Arsenic, Dissolved	MG/L												
Barium, Total	MG/L	0.065	0.0722	0.0644	0.072	0.061	0.044	0.073	0.070	0.083	0.130	0.120	0.137
Barium, Dissolved	MG/L												
Beryllium, Total	MG/L	ND	ND										
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L												
Calcium, Total	MG/L	21	19.1	11.4	15.6	17	6.5	9.6	14.9	17.7	34.2	39.6	40.7
Calcium, Dissolved	MG/L												
Cobalt, Total	MG/L	ND	ND										
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L												
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	0.0027	0.0012	ND	0.0013	ND
Chromium, Dissolved	MG/L												
Iron, Total	MG/L	0.72	1.81	1.15	2.2	0.25	1.2	0.23	0.65	0.25	0.67	0.87	0.72
Iron, Dissolved	MG/L												
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	0.00065	0.00036	0.00065	0.001	0.004
Lead, Dissolved	MG/L												
Magnesium, Total	MG/L	7.3	6.87	3.34	5.2	4.9	1.6	2.8	4.6	5.6	7.7	7.7	8.16
Magnesium, Dissolved	MG/L												
Manganese, Total	MG/L	ND	ND	ND	0.13	0.27	0.1	0.053	0.059	0.067	0.0069	0.0087	ND
Manganese, Dissolved	MG/L												
Mercury, Total	MG/L	ND	0.0003	ND	ND	ND	ND	ND	3E-05	3E-05	ND	ND	ND
Mercury, Dissolved	MG/L												
Nickel, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	0.0025	ND	ND	ND	ND
Potassium, Total	MG/L	17.3	17.6	11.8	12.1	10.5	11.5	9.2	11.3	13.6	3.9	3.3	3.7
Potassium, Dissolved	MG/L	ND	ND										
Sodium, Dissolved	MG/L	ND	ND										
Sodium, Total	MG/L	3.4	3.79	27	5.3	5.3	32.8	5.9	4.7	2.4	2.6	2.6	2.3
Silver, Total	MG/L	ND	ND										
Selenium, Total	MG/L	ND	ND										
Selenium, Dissolved	MG/L												
Thallium, Total	MG/L	ND	ND										
Vanadium, Total	MG/L	ND	ND										
Zinc, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0062	ND
Zinc, Dissolved	MG/L												
Calcium and Magnesium Hardness	MG/L												
VOCs													
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L	ND											
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L												
1,3-Dichloropropene	UG/L												
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L												
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L												
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND				ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L												
Diethyl ether	UG/L												
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L												
Methyl Tert-Butyl ether	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L												
Styrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L												
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L						ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-2 (WHCU02)

Hunting Ridge Construction and Demolition Debris Landfill, Hurlock, Maryland

ANALYTE	UNITS	1994Q2	1994Q3	1995Q1	1995Q3	1996Q1	1996Q3	1996Q4	1997Q1	1997Q2	1997Q3	1998Q1	1998Q2	1998Q3	1999Q1	1999Q3	2000Q1	2000Q3	2001Q1	2001Q3	2002Q1	2002Q3	2003Q1	2003Q4	2004Q1	2004Q3	2005Q1	2005Q3
Water Quality																												
Water Elevation	Feet																								24.08	23.48	23.8	22.73
Electrical Conductance (Field)	UMHOS/CM																				277	327	270	237	223	190	177	171
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	384	539	516	473	464	387		343	350	380	257		365	278	276	239	242	430	317	300	338	267	246	259	209	218	207
pH (Field)	S.U.																				4.56	4.6	4.74	4.91	5.72	4.91	4.99	5.11
pH (Lab Test)	S.U.	4.65	4.42	4.52	4.52	4.59	4.73		4.82	4.44	4.71	4.96		4.38	4.25	4.19	5.38	4.79	5.03	4.8	4.71	4.72	4.62	4.67	5.62	4.82	5.14	4.79
Turbidity (Field)	N.T.U.																				ND	1.4	1.7	7.5	0.17	2.3	1.6	1.3
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/														ND	ND	ND	ND	ND	ND								
Alkalinity, Total (As CaCO3)	MGCACO3/														ND	ND	ND	ND	ND	ND	4.2	3.6	ND	ND	3	4.6	ND	9.9
Alkalinity, Carbonate (As CaCO3)	MGCACO3/	ND	ND	ND	ND	ND	ND		1.7	3.2	1.9	2.5		ND	ND	ND	ND	ND	ND	ND								
Anion/Cation Balance	MG/L														0	0	0	0	0	0								
Chemical Oxygen Demand (COD)	MG/L	8	ND	ND	13	ND	ND		ND		ND	15		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	MG/L	29.1	34.7	35.3	31.6	25.7	28.7		29	27.2	33.9	22.1		34.6	29.7	28.6	22.8	30.4	31.8	32.6	31.2	33.6	24	31	35.5	23.8	22.7	24.2
Nitrate (As N)	MG/L	29.6	49.7	48.3	41.1	29.7	30	31.5	24.7	23.3	27	19.4		27.7	18.5	19.2	13.8	14	19	22.8	25	27	22.8	17.7	14.5	10.5	15.9	14.1
Sulfate	MG/L	ND	1.6	1.8	ND	1.4	8.5		1.1	1.6	3.4	1.8		2.6	ND	2.4	5.8	2.4	13.3	ND	ND	1.6	1.7	5.2	1.3	9.1	5.8	1.1
Total Hardness (As CaCO3)	MG/L	121	205	189	163	123	129		107		99.5	81.1		119	151	85.3	47.5	77.9	99	118	90.9	104	96.6	98.4	80	76	100	66.9
Total Dissolved Solids (TDS)	MG/L																				104	224	200	209	178	147	146	91
Total Organic Carbon	MG/L																											
Total Organic Halogen (TOX)	MG/L	32	ND	ND	ND	10	43		130	139	165	145		76	112	101	119	92.4	41.9	40.7								
Metals																												
Antimony, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																					
Barium, Total	MG/L	1.28	1.87	1.8	1.84	1.64	1.47		1.35		1.18	0.957		1.43	0.95	0.92	0.75	0.72	0.78	0.82	0.92	1	0.93	0.66	0.6	0.43	0.45	0.48
Barium, Dissolved	MG/L	1.25	1.98	1.94	1.91	1.44	1.51																					
Beryllium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																					
Calcium, Total	MG/L	12.9	21.9	24.3	24.2	18.6	18.5		17.7	17.2	15.3	12.4		21.9	15.5	15.6	14.1	15	19	21.6	21.3	23.8	22	18	17.5	14.2	14.8	15.2
Calcium, Dissolved	MG/L	12.4	24.1	23.8	23.4	17.8	19.4		18.8	19.5	17.1	12.2		21.3	15	16.3	14.1	14.8	20.4	22.8								
Cobalt, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																											
Chromium, Total	MG/L	ND	5.8	ND	3.7	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																					
Iron, Total	MG/L								0.0988		0.301	ND		0.0328	ND	ND	0.36	ND	ND	ND	0.071	0.045	0.12	0.088	ND	ND	0.051	0.055
Iron, Dissolved	MG/L	0.155	0.03	ND	ND	ND	ND																					
Lead, Total	MG/L	0.0013	0.0019	0.0012	0.0056	0.001	0.0013		0.0017		0.0014	ND		0.0012	ND	ND	ND	ND	ND	ND	0.0016	ND	ND	ND	ND	ND	ND	ND
Lead, Dissolved	MG/L	0.0008	0.0014	ND	0.0009	0.0016	ND																					
Magnesium, Total	MG/L	23.3	31.5	31.6	25.4	19.4	16.3		15.2	15.5	14.9	12.1		15.7	12.1	11.7	10.3	11.5	12.6	13.8	11.4	12.6	12.4	10.3	10.6	8.6	9	7.3
Magnesium, Dissolved	MG/L	21.8	35.2	31.4	25.4	17.7	19.5		16.1	17.7	17.4	12		17.4	12.6	11.8	10.1	11.1	13.4	14.3								
Manganese, Total	MG/L								0.499	0.475	0.473	0.381		0.57	0.47	0.44	0.36	0.38	0.48	0.49	0.4	0.41	0.49	0.36	0.37	0.28	0.3	0.21
Manganese, Dissolved	MG/L	0.532	0.928	0.796	0.667	0.538	0.577																					
Mercury, Total	MG/L	ND	0.00006	0.00016	ND	ND	ND		0.00015		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury, Dissolved	MG/L	ND	0.00007	0.00013	ND	ND	ND																					
Nickel, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	5.39	6.33	7.15	6.71	5.81	5.56		5.3	5.59	5.41	4.64		5.76	4.3	4.4	3.8	4.3	4	4.8	4.1	5.2	5.1	4	3.8	3.5	3.6	3.4
Potassium, Dissolved	MG/L	4.96	6.11	7.17	6.32	4.45	5.37		3.3	5.05	5.48	4.04		5.35	4.8	5.1	3.7	4	4.7	4.7								
Sodium, Dissolved	MG/L	7.47	7.43	6.46	6.83	7.37	7.98		8.26	8.82	7.2	8.21		6.12	5.2	6.2	5.4	4.3	5	5.2								
Sodium, Total	MG/L	7.73	6.83	7.87	6.31	6.48	8.28		8.31	7.31	6.08	7.86		5.98	8.8	5.8	5.3	5.6	5.3	5.2	5	5.2	6	4.7	5.1	3.9	4	3.9
Silver, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Dissolved	MG/L																											
Thallium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	MG/L	0.0073	0.0072	0.0098	0.0195	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	0.016	0.014	ND	ND	ND	ND	ND	ND
Zinc, Dissolved	MG/L	0.0083	0.008	0.0078	ND	ND	ND																					
Calcium and Magnesium Hardness	MG/L														88.5	89.3	76.8	82.6	106	116								
VOCs																												
1,1,1,2-Tetrachloroethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	0.2		1		1	0.5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND		0.2		0.5	0.9		0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	4	8	ND	ND		27	31		40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L																				ND							
1,2-Dibromo-3-Chloropropane DBCP	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																											
1,3-Dichloropropene	UG/L	ND	ND	ND	ND																							
1,4-Dichlorobenzene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	2	2	2	2	2	2		2		2	2		2	ND	ND	ND	ND	ND	ND								
2-Hexanone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																											
Acetone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L	14	1	1	1	1	2		2		2	2		2	ND	ND	ND	ND	ND	ND								
Acrylonitrile	UG/L	10	2	2	2	2	2		2		2	2		2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L																											
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	0.2	ND	ND	ND	ND		ND		0.3	0.5		ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	0.52	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L								ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																											
Diethyl ether	UG/L							ND		ND																		
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tert-Butyl ether	UG/L																				ND						ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L							ND		ND																		
Styrene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	0.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L							ND		ND																		
Toluene	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																											
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L					ND	ND		ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND		5	8	7	4		2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L																				0.62	0.93	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND		ND		1	3	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-2 (WHCU02)

Hunting Ridge Construction and Demolition Debris Land

ANALYTE	UNITS	2006Q1	2006Q3	2007Q1	2007Q3	2008Q1	2008Q3	2009Q1	2010Q1	2011Q1	2012Q1	2013Q1	2014Q1	2015Q1	2016Q1	2017Q1	2018Q1	2019Q1	2020Q1
Water Quality																			
Water Elevation	Feet		24.69	24.29	22.03	22.47	21.18	22.47	24.42	22.53	43.12			23.71	23.54	23.14	23.56	25.32	22.79
Electrical Conductance (Field)	UMHOS/CM	143	126	114	193	104	110	102	146.2	196	240	190	293	226	171	167	225	192	234
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	184	150	142	140	137	150	144					212	238	219	232	244	253	282
pH (Field)	S.U.	4.94	4.96	5.13	4.81	5.09	5.12	5.37	4.98	4.29	4.49	4.75	4.63	5.02	4.92	4.89	4.89	5.01	4.63
pH (Lab Test)	S.U.	5.02	4.8	5.2	4.93	5.23	4.94	5.37	5.49	5.49	4.87	5.45	5.36	5.34	5.44	5.22	5.30	5.41	4.96
Turbidity (Field)	N.T.U.	0.59	2.3	2.3	11.7	1.8	2.3	2.26	9	27.3	0	24.8	0	974	>MAX	1.4	3.9	12.9	356
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	0.020	0.012	0.018	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/																		
Alkalinity, Total (As CaCO3)	MGCACO3/	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND
Alkalinity, Carbonate (As CaCO3)	MGCACO3/																		
Anion/Cation Balance	MG/L																		
Chemical Oxygen Demand (COD)	MG/L	ND	ND	ND	ND	ND	ND						ND	ND	ND	ND	6.2	9	ND
Chloride	MG/L	18.8	13	12.5	12.1	12.9	11.3	11.7	12.1	13.5	15.5	17.9	23	17.1	19	27.4	36.2	37.1	39.4
Nitrate (As N)	MG/L	11.3	8.3	8.1	8.2	9.8	9.7	10.6	9.62	13.9	16.7	10.5	11.6	14.0	15.1	8.7	9.0	8.0	13.7
Sulfate	MG/L	4.7	5.7	9.7	7.2	3	4.2	7.74	3.54	11.5	9	10.9	13.3	16.9	12	12.1	12.3	10.8	18.3
Total Hardness (As CaCO3)	MG/L	45.7	41.7	35.5	48	37.6	42.2	41	40	64	80	56.1	72	72.0	76.0	84.0	84.0	72.0	98.4
Total Dissolved Solids (TDS)	MG/L	98	105	73	102	75	90	79	60	92	117	90	123	149	151	136	130	147	182
Total Organic Carbon	MG/L																		
Total Organic Halogen (TOX)	MG/L																		
Metals																			
Antimony, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00036	0.00034	ND	0.009
Arsenic, Dissolved	MG/L																		
Barium, Total	MG/L	0.45	0.35	0.31	0.32	0.31	0.34	0.322	0.358	0.46	0.4	0.4	0.46	0.50	0.66	0.40	0.43	0.35	0.492
Barium, Dissolved	MG/L																		
Beryllium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L																		
Calcium, Total	MG/L	12.7	8.6	7.9	10.4	9.5	10	9.27	8.5	13.7	12.1	15	16.1	18.8	17.6	17.5	20.5	17.5	23.8
Calcium, Dissolved	MG/L																		
Cobalt, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0020	0.0075	ND	ND	ND	0.006
Copper, Dissolved	MG/L																		
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	0.025	0.0012	ND	ND	0.009
Chromium, Dissolved	MG/L																		
Iron, Total	MG/L	ND	ND	0.068	1.6	0.24	2.6	0.248	0.071	4.5	0.21	0.11	0.23	10.4	28.1	0.24	0.11	0.11	9.47
Iron, Dissolved	MG/L																		
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.003	ND	ND		0.00064	0.01900	0.00059	0.00056	0.00042	0.0083
Lead, Dissolved	MG/L																		
Magnesium, Total	MG/L	6.6	5.2	5.6	4.8	4.3	4.2	4.26	4.52	6.6	6.6	6.4	8	8.5	9.4	8.2	9.5	8.4	9.44
Magnesium, Dissolved	MG/L																		
Manganese, Total	MG/L	0.21	0.18	0.2	0.14	0.12	0.13	0.121	0.137	0.26	0.19	0.16	0.053	0.36	0.42	0.16	0.17	0.14	0.316
Manganese, Dissolved	MG/L																		
Mercury, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.8E-05	ND	ND	ND	ND
Mercury, Dissolved	MG/L																		
Nickel, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0046	0.01	ND	ND	ND	ND
Potassium, Total	MG/L	3	3.2	3.1	2.7	2.6	2.8	2.72	3	3.2	3	3	3	3.4	4	2.9	3	2	3.1
Potassium, Dissolved	MG/L																		
Sodium, Dissolved	MG/L																		
Sodium, Total	MG/L	4.4	4.2	4.4	4	3.9	4.1	4.15	5.6	5.6	5.3	5.3	4.7	5.0	4.8	4.6	5.3	5.2	5.3
Silver, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Selenium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Selenium, Dissolved	MG/L																		
Thallium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Vanadium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND											
Zinc, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.013	0.022	0.0052	0.0071	ND	0.011
Zinc, Dissolved	MG/L																		
Calcium and Magnesium Hardness	MG/L																		
VOCs																			
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L	ND	ND	ND	ND	ND	ND												
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																		
1,3-Dichloropropene	UG/L																		
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L																		
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																		
Acetone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L																		
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND				ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																		
Diethyl ether	UG/L																		
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L	ND																	
Methyl Tert-Butyl ether	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L																		
Styrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L																		
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L											ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	ND	ND	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-3 (WHCD03)

Hunting Ridge Construction and Demolition Debris Landfill, Hurlock, Maryland

QUARTER	UN TS	1994Q2	1994Q3	1995Q1	1995Q3	1996Q1	1996Q3	1997Q1	1997Q2	1997Q3	1998Q1	1998Q2	1998Q3	1999Q1	1999Q3	2000Q1	2000Q3	2001Q1	2001Q3	2002Q1	2002Q3	2003Q1	2003Q4	2004Q1	2004Q3	2005Q1	2005Q3	2006Q1	2006Q3	2007Q1	2007Q3	2008Q1	2008Q3	2009Q1	2009Q3
Water Quality																																			
Water Elevation	Feet																							20.63	20.47	20.12	19.95		20.77	21.76	19.66	20.27	19.09	20.13	20.21
Electrical Conductance (Field)	UMHOS/CM																			59	67	70	89	83	80	63	99	67	68.2	61	139	46	74	47	71.3
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	19.4	52.9	25	53	34	47.5	44.3	40	60.6	49.6		108	35.2	41.3	43.4	57.7	50.5	80.5	61.7	70.1	88.5	95.7	108	99.3	73	117	90.9	82.9	80.6	119	65	101	92.1	67.5
pH (Field)	S.U.																			5.03	4.99	4.99	5.08	4.85	5.02	5.16	5.29	4.94	4.92	5.16	4.8	5.15	4.94	5.22	4.53
pH (Lab Test)	S.U.	5.46	5.25	5.49	5.3	5.38	5.16	5.22	4.85	5.12	5.29		4.72	4.69	4.4	4.41	5.13	5.43	5.03	5.03	5.01	4.79	4.94	5.42	4.93	5.57	5.3	5.25	4.84	5.41	5.09	5.61	5.12	5.42	5.18
Turbidity (Field)	N.T.U.																			ND	6.4	ND	1.1	0.26	2.32	1.3	0.3	1	2.32	2.32	0.28	0.18	2.32	2.14	0
Ammonia (As N)	MG/L	ND	1.57	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/													9.9	7.6	6.4	ND	5.6	13.4																
Alkalinity, Total (As CaCO3)	MGCACO3/													9.9	7.6	6.4	ND	5.6	13.4	9.3	5.9	ND	10.8	12.8	ND	9.8	16.7	ND	8.8	9.9	20	8.8	11.7	ND	13.3
Alkalinity, Carbonate (As CaCO3)	MGCACO3/	5	3	4	2	4.1	4.3	6.3	7.4	6.1	6.1		6	ND	ND	ND	ND	ND	ND																
Anion/Cation Balance	MG/L													0	0	0	0	0	0																
Chemical Oxygen Demand (COD)	MG/L	ND	8	ND	ND	ND	ND	ND		8	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.8	ND	ND	ND	ND
Chloride	MG/L	1	4.2	1.6	4.8	3.2	3.5	3.3	3.3	4.7	4.4		9.9	2.2	2.3	2.7	4.4	3.8	7.7	5.3	6.3	8.1	12.8	15.2	11.6	8.8	10.6	9.6	8.4	7.2	9.7	6.4	8.4	6.79	8.45
Nitrate (As N)	MG/L	0.24	2.47	0.56	2.4	1.25	1.9	1.13	1.04	2.39	1.85		6.24	0.37	0.45	0.52	2.4	1.3	3.2	2.6	2.8	2.7	3	2.6	1.8	2.6	3.9	2.4	1.9	1.6	1.5	1.6	3.2	1.82	1.69
Sulfate	MG/L	ND	1.6	3.1	ND	ND	ND	2.9	2.9	3.2	ND		5.1	ND	2.3	ND	2.4	ND	ND	1.6	4.4	ND	3.2	ND	1.6	ND	2.4	ND	3.8	6.6	19.2	ND	3.4	4.81	2.94
Total Hardness (As CaCO3)	MG/L	2	8.8	3.3	8.2	3.6	8.8	7.5		10.7	10.7		26.4	31.1	ND	39.6	12.3	11.9	24	6.1	8	ND	45	24	20	20	28	7.6	5	2.2	36	8.7	20.8	9.14	11.5
Total Dissolved Solids (TDS)	MG/L																			62	46	37	68	94	66	57	68	57	60	73	95	34	69	27	50
Total Organic Carbon	MG/L																																		
Total Organic Halogen (TOX)	MG/L	11	ND	ND	ND	10	ND	10		16	20		173	29.6	52.8	29	138	73.2	321																
Metals																																			
Antimony, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.0007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																												
Barium, Total	MG/L	0.0565	0.159	0.0558	0.164	0.0695	0.164	0.142		0.192	0.186		0.468	0.14	0.12	0.14	0.24	0.21	0.35	0.24	0.27	0.36	0.46	0.42	0.36	0.3	0.4	0.35	0.33	0.28	0.43	0.22	0.34	0.237	0.278
Barium, Dissolved	MG/L	0.0314	0.158	0.0617	0.141	0.0675	0.164																												
Beryllium, Total	MG/L																			ND	0.002	0.0022	0.0026	0.0024	0.0028	0.002	ND	ND	ND	ND	ND	ND	ND	ND	
Cadmium, Total	MG/L	0.0025	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L	0.002	ND	ND	ND	ND	ND																												
Calcium, Total	MG/L	0.58	1.5	0.466	1.68	0.571	1.32	1.3	1.14	1.7	1.7		4	22.7	1	1.2	2.1	1.7	2.9	2	2.1	3.2	3.9	3.7	3	2.4	4	2.6	2.4	2.3	4.7	1.7	3.5	1.94	2.2
Calcium, Dissolved	MG/L	0.37	1.4	0.57	1.3	0.948	1.4	1.25	1.4	2	1.69		3.9	1.1	1.1	1.2	2	1.7	3.1																
Cobalt, Total	MG/L																			ND	ND	0.012	0.012	0.013	0.012	0.012	0.012	0.013	0.013	0.014	0.016	0.013	0.01	0.0113	
Copper, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																																		
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																												
Iron, Total	MG/L							0.041		ND	ND		0.031	0.34	ND	ND	0.15	ND	ND	ND	0.22	ND	0.041	ND	ND	ND	ND	ND	ND	ND	0.032	ND	1.1	0.0507	0.033
Iron, Dissolved	MG/L	ND	ND	0.0179	ND	ND	ND																												
Lead, Total	MG/L	0.0008	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																												
Magnesium, Total	MG/L	0.476	1.46	0.47	1.41	0.436	1.07	1	0.949	1.6	1.6		4	4.4	ND	1.2	2	1.6	2.8	2	1.8	2.6	3.3	3.2	2.5	2.3	4.1	2.6	2.4	2.6	5.7	1.9	3.1	1.89	2.05
Magnesium, Dissolved	MG/L	0.27	1.3	0.46	1.2	0.766	1.3	0.931	1.17	1.14	1.54		4.27	ND	1	1.2	2	1.6	3																
Manganese, Total	MG/L							0.0437		0.0691	0.0781		0.0987	0.15	0.051	0.062	0.13	0.083	0.14	ND	0.1	0.13	0.18	0.18	0.15	0.13	0.33	0.17	0.17	0.19	0.61	0.13	0.27	0.129	0.153
Manganese, Dissolved	MG/L	0.0121	0.0358	0.0217	0.0343	0.0195	0.039																												
Mercury, Total	MG/L	ND	0.00007	0.00009	ND	ND	0.00007	0.00025		0.00023	0.00012		0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0004	ND	ND	ND	ND	ND	ND	ND	0.00026	ND	0.0008	ND	0.0004
Mercury, Dissolved	MG/L	ND	0.00007	0.00009	ND	ND	0.00006																												
Nickel, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	1.11	1.56	1.01	1.62	0.92	1.68	1.3	1.77	1.83	1.57		3.04	3.2	1.4	1.7	2.2	1.8	2.7	1.7	2.3	2.5	2.9	2.5	2.8	2.4	2.7	2.2	2.6	2.1	3.1	2.2	2.5	2.34	2.33
Potassium, Dissolved	MG/L	0.76	1.21	1.12	1.37	1.02	1.48	0.8	1.41	1.67	1.53		2.85	1.3	1.7	2	1.5	2	2.7																
Sodium, Dissolved	MG/L	2.21	3.3	2.78	3.74	3.01	3.36	3.23	3.57	4.72	3.9		5.3	2.8	3.3	3.5	4.8	3.9	5.6																
Sodium, Total	MG/L	2.17	3.27	2.92	3.53	2.48	3.62	3.19	2.9	3.5	4.5		5	39.8	3	2.9	5	3.9	5.5	4.3	4.7	4.9	7.1	5.8	5.3	4.5	6.6	5.6	5.2	4.6	6	4.3	6.2	4.75	5.6
Silver, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Selenium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Selenium, Dissolved	MG/L																																		
Thallium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Vanadium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Zinc, Total	MG/L	0.0045	0.0122	0.0088	0.0128	ND	ND	ND		0.0125	0.0107		0.0202	0.023	ND	ND	0.026	ND	0.02	0.018	0.017	0.022	0.026	0.023	0.026	0.018	0.019	0.016	0.02	0.019	0.021	0.021	0.021	0.0158	0.0165
Zinc, Dissolved	MG/L	0.0046	0.0103	0.008	ND	ND	ND																												
VOCs																																			
1,1,1,2-Tetrachloroethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.8	ND	ND	ND	ND	ND	ND	ND	0.21	ND	2	1.4	0.73	ND	0.92	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		1	6	29	43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	3.7	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L																			ND														ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dibromoethane (EDB)	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																																		
1,3-Dichloropropene	UG/L	ND	ND	ND	ND																														
1,4-Dichlorobenzene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	2	2	2	2	2	2	2		2	2		3	ND	ND	ND	ND	ND	ND																
2-Hexanone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																																		
Acetone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L	14	1	1	1	1	2	2		2	2		3	ND	ND	ND	ND	ND	ND																
Acrylonitrile	UG/L	10	2	2	2	2	2	2		2	2		3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L																																	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L					ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.42	
Dichlorodifluoromethane	UG/L																																		
Diethyl ether	UG/L								ND																										
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																			ND	ND	ND	ND	ND	ND										
Methyl Tert-Butyl ether	UG/L																			ND					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	0.92	0.41	ND	0.56	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L								ND																										
Styrene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L								ND																										
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																																		
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L					ND	ND	ND		ND	ND		0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L																			ND	3.8	1.6	12	5.7	4.8	ND	4.2	3.8	1.5	1.8	2.3	ND	0.9	ND	3.8
Vinyl acetate	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.61	4.2	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-3 (WHCD03)

Hunting Ridge Construction and Demolition Debris Landf

QUARTER	UNITS	2010Q1	2010Q3	2011Q1	2011Q3	2012Q1	2012Q3	2013Q1	2013Q3	2014Q1	2014Q3	2015Q1	2015Q3	2016Q1	2016Q3	2017Q1	2017Q3	2018Q1	2018Q3	2019Q1	2019Q3	2020Q1	2020Q3
Water Quality																							
Water Elevation	Feet	21.18	20.01	20.13	19.45	30.34					19.17	20.7	19.77	20.53	20.15	19.97	19.31	20.44	20.34	21.18		20.36	
Electrical Conductance (Field)	UMHOS/CM	62.6	94	76.8	86	96	85	80	74	95	110	59	74	42	32	37	76	42	69	35	88	41	41
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM										95.5	64.8	104	55	63.4	49.8	69.3	46.9	78.1	51.1	103	56	56
pH (Field)	S.U.	4.99	4.77	4.33	5.02	4.58	5.2	4.65	4.57	4.24	4.64	4.99	4.95	4.95	4.8	4.94	4.62	5.04	4.56	5.21	4.13	4.84	4.56
pH (Lab Test)	S.U.	5.76	5.62	6.13	5.28	5.04	5.84	5.65	5.75	5.25	5.29	5.31	5.57	5.35	4.97	5.99	5.48	5.63	5.16	5.62	5.73	5.29	5.47
Turbidity (Field)	N.T.U.	0	1	19.82	0	0	0	17.9	0	0	0	3.9	450	7.4	0	26.0	31.2	12.2	0.4	16.4	30	11.3	ND
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.087	ND	ND	ND	ND	0.012	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/																						
Alkalinity, Total (As CaCO3)	MGCACO3/	ND	15.7	9.4	28.6	11.7	18.5	8.3	5.4	6.1	9.3	5.9	11.1	2.3	7.5	5.6	7.1	8.2	ND	7.2	7.7	9.0	11
Alkalinity, Carbonate (As CaCO3)	MGCACO3/																						
Anion/Cation Balance	MG/L																						
Chemical Oxygen Demand (COD)	MG/L									ND	ND	ND	ND	ND	6.1	ND	5.4	ND		ND	ND	ND	ND
Chloride	MG/L	7.3	7.35	7.7	14.6	6.8	7.8	4.8	3.9	4.2	6	3	6.5	3.1	2.6	2.3	4.1	3.1	4.5	2.4	5.2	2.7	3.2
Nitrate (As N)	MG/L	1.81	1.46	2.3	2.1	3.8	2.3	3.7	3.7	3.6	2.5	2.9	3	2.7	2.2	2.2	2.6	1.8	2.2	1.5	3.8	1.47	1.5
Sulfate	MG/L	ND	8.31	4.2	ND	3	ND	5.4	ND	2.3	11.9	3.5	11.7	2.5	3.5	2.4	5.4	2.9	6.5	3.6	11.2	3.7	3.2
Total Hardness (As CaCO3)	MG/L	8	20	16	28	20	20	16	16	20	24	24	28	24	12	8	16	8	12	12	36	11.8	13.2
Total Dissolved Solids (TDS)	MG/L	ND	15	29	81	88	43	49	80	52	53	44	65	58	35	32	49	60	63	39	81	52	52
Total Organic Carbon	MG/L																						
Total Organic Halogen (TOX)	MG/L																						
Metals																							
Antimony, Total	MG/L						ND																
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0019	ND	ND
Arsenic, Dissolved	MG/L																						
Barium, Total	MG/L	0.234	0.345	0.3	0.33	0.34	0.34	0.32	0.32	0.28	0.35	0.24	0.4	0.24	0.24	0.23	0.27	0.21	0.29	0.19	0.40	0.209	0.249
Barium, Dissolved	MG/L																						
Beryllium, Total	MG/L						ND																
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.002
Cadmium, Dissolved	MG/L																						
Calcium, Total	MG/L	1.7	3.5	2.3	3.3	2.4	3.4	2.5	2.2	2.1	3.4	1.8	4.1	1.7	2	1.6	2.2	1.5	2.5	1.4	4.3	1.57	1.81
Calcium, Dissolved	MG/L																						
Cobalt, Total	MG/L						0.011																
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0014	ND	ND	ND	ND	ND	ND	ND	0.0016	ND	ND
Copper, Dissolved	MG/L																						
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0021	0.001	0.00085	0.0021	0.0024	0.0015	0.0021	0.0015	0.0180	ND	ND
Chromium, Dissolved	MG/L																						
Iron, Total	MG/L	ND	ND	ND	0.029	ND	ND	0.084	ND	0.3	ND	0.052	0.29	0.17	0.033	0.10	0.15	0.51	ND	0.12	0.133	0.14	0.04
Iron, Dissolved	MG/L																						
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0003	0.0002	0.00021	0.00037	ND	0.00041	ND	0.00019	0.00510	ND	ND
Lead, Dissolved	MG/L																						
Magnesium, Total	MG/L	1.8	3.26	2.3	3	2.3	2.9	2.3	2.3	2.2	3.9	1.9	3.8	1.9	2	1.8	2.1	1.8	2.6	1.6	5.2	1.91	2.1
Magnesium, Dissolved	MG/L																						
Manganese, Total	MG/L	0.127	0.328	0.19	0.3	0.2	0.32	0.18	0.18	0.18	0.46	0.15	0.49	0.15	0.19	0.14	0.25	0.14	0.31	0.13	0.7	0.176	0.222
Manganese, Dissolved	MG/L																						
Mercury, Total	MG/L	ND	0.0003	0.0002	0.0005	ND	0.0004	ND	ND	ND	ND	ND	0.0002	ND	0.00004	ND	0.00007	ND	0.00006	ND	0.00013	ND	ND
Mercury, Dissolved	MG/L																						
Nickel, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0021	0.0035	0.0023	0.0024	ND	0.003	ND	0.0028	ND	0.012	ND	ND
Potassium, Total	MG/L	2.38	2.26	2.6	2.2	2.9	2.4	3.2	2.9	2.6	2.4	2.6	2.6	2.6	2.6	2.8	2.6	2.8	2.6	2.5	3.2	2.3	2.6
Potassium, Dissolved	MG/L																						
Sodium, Dissolved	MG/L																						
Sodium, Total	MG/L	4.3	6	5.3	5.9	5.4	6.1	5.2	4.1	3.3	4.4	3.1	4.6	2.6	3	2.4	3.6	2.3	3.6	1.8	3.5	2.6	3.0
Silver, Total	MG/L						ND																
Selenium, Total	MG/L						ND																
Selenium, Dissolved	MG/L																						
Thallium, Total	MG/L						ND																
Vanadium, Total	MG/L						ND																
Zinc, Total	MG/L	0.0153	0.0191	0.018	0.018	0.019	0.019	0.018	0.018	0.019	0.021	0.022	0.023	0.15	0.015	0.019	0.012	0.16	0.021	0.013	0.044	0.013	0.013
Zinc, Dissolved	MG/L																						
VOCs																							
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	2.5	ND	5.6	1.7	1.3	ND	ND		2	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L																						
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																						
1,3-Dichloropropene	UG/L																						
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L																						
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																						
Acetone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L																						
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L						ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																						
Diethyl ether	UG/L																						
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																						
Methyl Tert-Butyl ether	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L																						
Styrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L																						
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L						ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	1.7	1.3	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	2.2	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-4 (RHCD04)

Hunting Ridge Construction and Demolition Debris Landfill, Hurlock, Maryland

QUARTER	UNITS	1994Q2	1994Q3	1995Q1	1995Q3	1996Q1	1996Q3	1997Q1	1997Q2	1997Q3	1998Q1	1998Q3	1999Q1	1999Q3	2000Q1	2000Q3	2001Q1	2001Q3	2002Q1	2002Q3	2003Q1	2003Q4	2004Q1	2004Q3
Water Quality																								
Water Elevation	Feet																						18.97	18.3
Electrical Conductance (Field)	UMHOS/CM																		76	72	59	57	60	61
Electrical Conductance (25°C) (Lab Test	UMHOS/CM	45.7	33.7	29	30	42.2	38.4	51.5	62	56.2	68.3	54.6	68.2	73	72.2	57.3	65.3	65.1	74	78.4	59.7	59.2	71.8	81.4
pH (Field)	S.U.																		4.79	4.92	5	5.04	4.93	4.99
pH (Lab Test)	S.U.	5.65	5.44	5.42	5.44	5.36	5.26	5.2	5.02	5.16	5.1	6.09	4.52	4.44	4.36	5.08	5.1	5.1	5.02	5.03	4.23	5.45	5.35	5.43
Turbidity (Field)	N.T.U.																		ND	ND	ND	0.6	2.9	2
Ammonia (As N)	MG/L	ND	ND	ND	0.23	ND	ND	0.02		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/												21.7	13.2	15.2	ND	8.2	10						
Alkalinity, Total (As CaCO3)	MGCACO3/												21.7	13.2	15.2	ND	8.2	10	13.2	13.7	ND	16.3	8.2	11.9
Alkalinity, Carbonate (As CaCO3)	MGCACO3/	9	6	5	4	4.9	4.9	6.3	7.8	10.1	14.1	8.1	ND	ND	ND	ND	ND	ND						
Anion/Cation Balance	MG/L												0	0	0	0	0	0						
Chemical Oxygen Demand (COD)	MG/L	ND	ND	ND	11	ND	28	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22.3	ND
Chloride	MG/L	4.7	4.4	4.2	4.1	6	6.5	8.7	9.5	6.6	9.1	6.4	7.7	8.1	8.3	8	11.2	10.2	12	10.3	9.2	8.4	5.8	6.4
Nitrate (As N)	MG/L	0.03	0.07	0.03	0.03	0.04	ND	0.02	ND	0.23	0.04	1.15	ND	0.19	ND	0.26	0.73	1	0.95	0.69	0.96	0.77	0.51	0.46
Sulfate	MG/L	ND	1.8	2.4	ND	1.4	ND	2.5	2.6	1.6	1	5.3	ND	3.5	ND	ND	ND	ND	1.4	2.1	ND	1.8	9.2	12.2
Total Hardness (As CaCO3)	MG/L	6.3	3.5	2.8	2.3	2.8	3.1	3.8		5.9	7.8	7.1	22.2	ND	11.8	8.2	7.9	16	4.4	4	ND	12.3	24	8
Total Dissolved Solids (TDS)	MG/L																		64	44	35	58	62	54
Total Organic Carbon	MG/L																							
Total Organic Halogen (TOX)	MG/L	ND	ND	ND	ND	10	25	104		282	509	213	316	407	303	264	110	132						
Metals																								
Antimony, Total	MG/L																		ND	ND	ND	ND	ND	ND
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																	
Barium, Total	MG/L	0.0281	0.0279	0.0211	0.0248	0.0305	0.0373	0.049		0.067	0.0854	0.0784	0.096	0.11	0.1	0.096	0.087	0.098	0.12	0.12	0.09	0.096	0.1	0.11
Barium, Dissolved	MG/L	0.0235	0.0314	0.0249	0.0221	0.0294	0.0355																	
Beryllium, Total	MG/L																		ND	ND	ND	ND	ND	ND
Cadmium, Total	MG/L	0.0026	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																	
Calcium, Total	MG/L	1.89	0.863	0.565	0.501	0.334	0.38	0.38	0.504	0.76	0.64	0.84	4.7	ND	ND	ND	ND	ND	0.88	0.94	0.53	0.65	0.63	0.94
Calcium, Dissolved	MG/L	1.7	0.7	0.48	0.34	0.437	0.39	0.425	0.541	0.782	0.683	0.878	ND	ND	ND	ND	ND	ND						
Cobalt, Total	MG/L																		ND	ND	0.01	ND	0.022	0.022
Copper, Total	MG/L																		ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																							
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																	
Iron, Total	MG/L							ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND
Iron, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																	
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																	
Magnesium, Total	MG/L	0.6	0.468	0.435	0.363	0.409	0.469	0.69	0.899	0.98	1.5	1.2	2.3	1.6	1.6	1.4	1.4	1.6	1.7	1.7	1.5	1.4	2.1	2.4
Magnesium, Dissolved	MG/L	0.5	0.42	0.38	0.36	0.613	0.52	0.635	0.967	0.676	1.37	1.03	1.4	1.6	1.6	1.4	1.5	1.7						
Manganese, Total	MG/L							0.0111		0.026	0.0679	0.0415	0.097	0.089	0.11	0.1	0.13	0.23	0.19	0.2	0.26	0.21	0.52	0.56
Manganese, Dissolved	MG/L	0.0411	0.0138	0.015	0.0097	0.0114	0.0103																	
Mercury, Total	MG/L	ND	0.00006	0.0001	ND	0.00005	ND	0.00057		0.0031	0.0021	0.00034	0.00076	0.0015	ND	0.00044	ND	ND	ND	0.00042	ND	ND	ND	ND
Mercury, Dissolved	MG/L	ND	0.00006	0.00012	ND	ND	ND																	
Nickel, Total	MG/L																		ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	1.75	1.22	1.37	1.09	1.64	1.6	1.7	1.97	1.98	2.49	2.32	2.4	2.4	2.6	2.6	2.5	2.9	2.5	3.2	2.9	2.6	2.7	3
Potassium, Dissolved	MG/L	1.33	0.9	1.57	1.17	1.26	1.42	1.1	2	1.88	2.07	2.21	2.4	2.9	3.2	2.6	2.9	2.9						
Sodium, Dissolved	MG/L	4.5	4.87	3.4	3.5	4.86	4.92	6.68	8.43	7.46	8.58	6.24	7.7	8	8.6	7.6	7.3	7.4						
Sodium, Total	MG/L	4.96	4.49	3.48	3.26	4.29	5.27	6.57	8.43	5.82	7.98	5.86	11.3	7.8	7.5	7.2	7.2	7.4	8	8.5	6.6	6.2	5.4	5.1
Silver, Total	MG/L																		ND	ND	ND	ND	ND	ND
Selenium, Total	MG/L																		ND	ND	ND	ND	ND	ND
Selenium, Dissolved	MG/L																							
Thallium, Total	MG/L																		ND	ND	ND	ND	ND	ND
Vanadium, Total	MG/L																		ND	ND	ND	ND	ND	ND
Zinc, Total	MG/L	ND	0.0056	ND	0.021	ND	ND	ND		ND	ND	ND	0.064	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Dissolved	MG/L	0.005	ND	ND	ND	ND	ND																	
VOCs																								
1,1,1,2-Tetrachloroethane	UG/L																		ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	0.2		1	1	3	ND	ND	ND	ND	ND	ND	ND	0.26	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.4	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	0.5	1	ND	ND	ND	ND	ND	ND	1.9	1.8	ND	0.62	ND	0.49
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	18	63	56	14	47	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L																		ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L																		ND					
1,2-Dibromo-3-Chloropropane DBCP	UG/L																		ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	UG/L																		ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L																		ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																							
1,3-Dichloropropene	UG/L	ND	2	ND	ND																			
1,4-Dichlorobenzene	UG/L																		ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	2	2	2	2	2	2	2		3	2	3	ND	ND	ND	ND	ND	ND						
2-Hexanone	UG/L																		ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																							
Acetone	UG/L																		ND	8.4	3.6	ND	ND	ND
Acrolein	UG/L	14	1	1	1	1	2	2		3	2	3	ND	ND	ND	ND	ND	ND						
Acrylonitrile	UG/L	10	2	2	2	2	2	2		3	2	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L																		ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.4	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L																		ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND		0.4	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L																							
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.4	1	0.4	ND	ND	ND	ND	ND	ND	0.34	0.86	ND	ND	ND	ND
Chloroform	UG/L	ND	0.2	0.2	ND	1	0.7	0.6		0.7	0.3	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.6	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L																		ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L					ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.1	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L																		ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																							
Diethyl ether	UG/L								ND															
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L																		ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L																		ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L																		ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																		ND	ND	ND	ND	ND	ND
Methyl Tert-Butyl ether	UG/L																		ND					
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND		0.5	0.3	4	ND	5.4	ND	ND	ND	ND	1.8	1.3	ND	0.52	ND	0.46
p-Dioxane	UG/L								ND															
Styrene	UG/L																		ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.4	ND	0.4	ND	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L								ND															
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																							
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.4	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L					ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L																		ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L																		13	ND	1.1	7.3	ND	4.6
Vinyl acetate	UG/L																		ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND	ND		0.5	ND	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-4 (RHCD04)

Hunting Ridge Construction and Demolition Debris La

QUARTER	UNITS	2005Q1	2005Q3	2006Q1	2006Q3	2007Q1	2007Q3	2008Q1	2008Q3	2009Q1	2009Q3	2010Q1	2010Q3	2011Q1	2011Q3	2012Q1	2012Q3	2013Q1	2013Q3	2014Q1	2014Q3	2015Q1	2015Q3	2016Q1	2016Q3	2017Q1	2017Q3
Water Quality																											
Water Elevation	Feet	19.03	17.55		18.14	18.97	16.15	17.16	16.57	17.93	18.14	19.78	17.72	18.00	16.93	18.55					17.10	18.85	17.45	18.64	18.13	18.14	17.04
Electrical Conductance (Field)	UMHOS/CM	79	94	73	72.5	79	114	64	59	64	88.9	100.9	80	85.5	79	113	68	103	104	131	104	100	80	72	53	70	104
Electrical Conductance (25°C) (Lab Test	UMHOS/CM	94.8	103	88.4	92.6	101	85.4	81.7	76.4	89.2	83.4											109	95.6	95.9	104	95.8	88.2
pH (Field)	S.U.	5.1	5.24	4.94	4.98	5.22	4.6	5.18	5.02	5.43	4.96	4.92	4.89	4.34	4.71	4.54	5.4	4.62	4.77	4.36	4.52	4.88	4.85	4.6	4.9	4.43	4.61
pH (Lab Test)	S.U.	5.55	5.16	5.32	4.84	5.32	4.8	5.49	5.28	5.44	5.19	5.64	5.52	6.04	5.07	4.95	5.67	5.63	5.64	5.49	5.52	5.22	5.45	5.19	4.86	5.29	5.29
Turbidity (Field)	N.T.U.	0.78	0.75	0.65	2	2	0.69	0.47	2	1.05	0	4	0	30	0	0	0	12.4	0	0	0	9.2	4.4	16.2	26	4.6	34.7
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.068	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/																										
Alkalinity, Total (As CaCO3)	MGCACO3/	9.2	20.5	ND	5.7	ND	7.4	ND	8.1	ND	6	8.7	8.9	9.2	7.2	7.2	9.4	7.6	ND	ND	18.1	4.0	4.5	0.97	11.1	2.5	3.2
Alkalinity, Carbonate (As CaCO3)	MGCACO3/																										
Anion/Cation Balance	MG/L																										
Chemical Oxygen Demand (COD)	MG/L	ND	ND	ND	16.2	ND	10.5	ND	ND												ND	ND	ND	ND	ND	ND	ND
Chloride	MG/L	4.9	10	5.4	5	4.5	8.8	4.4	4.8	5.34	5.97	6.11	6.65	5.8	3.5	3.1	4.1	4.1	2.8	3.0	3.6	3.2	3.0	3.0	7.4	3.1	3.4
Nitrate (As N)	MG/L	0.43	3.3	0.5	0.59	0.67	1.6	0.66	0.51	0.397	0.21	0.143	0.631	0.36	0.31	0.11	0.14	0.13	0.12	0.16	0.3	0.59	0.39	0.39	2.4	1.3	0.81
Sulfate	MG/L	25.1	3.1	19.2	20.5	29.4	11.2	14.8	11.4	21	21	26.7	13	20.1	17.2	24.6	21.3	27.3	29.5	32	28.4	32.3	30.2	25.5	12.1	21.4	22.2
Total Hardness (As CaCO3)	MG/L	28	12.6	10.4	11.1	24.9	20	12.1	13.4	17.5	16	24	16	20	16.1	26	16	20.9	28	32	28	40	24	32	36	32	32
Total Dissolved Solids (TDS)	MG/L	88	91	60	75	51	113	56	54	57	58	52	50	51	88	101	53	54	98	58	64	65	52	75	63	70	67
Total Organic Carbon	MG/L																										
Total Organic Halogen (TOX)	MG/L																										
Metals																											
Antimony, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND							ND										
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0007
Arsenic, Dissolved	MG/L																										
Barium, Total	MG/L	0.16	0.19	0.14	0.14	0.16	0.16	0.14	0.1	0.137	0.131	0.156	0.12	0.16	0.12	0.15	0.13	0.16	0.16	0.16	0.14	0.15	0.14	0.15	0.16	0.17	0.16
Barium, Dissolved	MG/L																										
Beryllium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND							ND										
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00036	0.00046	ND	0.0035	ND
Cadmium, Dissolved	MG/L																										
Calcium, Total	MG/L	1.3	1.7	0.99	0.96	1.2	1.5	0.98	0.92	1.07	1.2	1.3	1	1.2	1.1	1.3	1.1	1.5	1.5	1.5	1.5	1.6	1.6	1.9	1.7	1.8	1.7
Calcium, Dissolved	MG/L																										
Cobalt, Total	MG/L	0.04	0.023	0.03	0.034	0.043	0.031	0.043	0.024	0.0362							0.03										
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																										
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00073	0.00120	0.00140	0.0065	0.0092
Chromium, Dissolved	MG/L																										
Iron, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	0.035	ND	ND	0.042	ND	0.14	ND	ND	ND	ND	ND	ND	0.1	ND	0.11	0.37	0.63	0.22	4.9
Iron, Dissolved	MG/L																										
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00093	ND	0.0004	0.0018
Lead, Dissolved	MG/L																										
Magnesium, Total	MG/L	4.4	3.4	3.4	3.3	4.6	3.2	3.5	2.5	3.55	3.89	4.71	3.47	4.2	3.9	4.7	3.7	5	5.6	5.3	5.1	5.6	4.9	5.7	4.7	5.8	4.7
Magnesium, Dissolved	MG/L																										
Manganese, Total	MG/L	0.96	0.56	0.71	0.78	1.1	0.71	0.87	0.57	0.837	0.866	1.08	0.771	0.96	0.79	1.1	0.79	1	1.2	1.2	1.0	1.2	0.93	1.10	0.82	1.0	0.90
Manganese, Dissolved	MG/L																										
Mercury, Total	MG/L	ND	ND	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	9.8E-05	ND	3.5E-04	ND	ND
Mercury, Dissolved	MG/L																										
Nickel, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0035	0.0026	0.0039	0.0023	0.0059	0.0059
Potassium, Total	MG/L	3.9	3.3	3	3.4	3.5	3.3	3.4	2.7	3.35	3.13	3.85	2.73	3.4	3	3.6	3	3.8	3.3	2.6	3.2	3.3	3.2	3.2	3.2	3.5	3.2
Potassium, Dissolved	MG/L																										
Sodium, Dissolved	MG/L																										
Sodium, Total	MG/L	5	7.6	5.1	4.6	3.9	5.9	5.1	4.9	4.99	4.2	4.4	5.1	4.4	4.1	3.3	3.7	3.2	2.5	3.3	2.4	2.4	2.2	2	4.3	2.1	1.9
Silver, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND							ND										
Selenium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND							ND										
Selenium, Dissolved	MG/L																										
Thallium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND							ND										
Vanadium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND							ND										
Zinc, Total	MG/L	0.012	0.012	ND	ND	0.012	0.014	0.012	ND	ND	ND	0.0116	ND	0.01	0.01	ND	ND	0.011	0.012	0.019	0.019	0.014	0.011	0.017	0.012	0.016	0.014
Zinc, Dissolved	MG/L																										
VOCs																											
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	0.88	ND	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	0.54	ND	7.9	1.4	ND	ND	ND	ND	2.1	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L									ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L	ND	ND	ND	ND	ND	ND	ND	ND																		
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																										
1,3-Dichloropropene	UG/L																										
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L																										
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																										
Acetone	UG/L	3	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L																										
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L									ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.37	ND	ND	ND	0.55
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	5.44							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																										
Diethyl ether	UG/L																										
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																										
Methyl Tert-Butyl ether	UG/L	ND	0.52	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND
Methylene chloride	UG/L	ND	1.5	ND	ND	ND	4.8	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND
p-Dioxane	UG/L																										
Styrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L																										
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	0.83	ND	ND	ND	13	1.2	0.94	ND	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.6	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E
HISTORICAL GROUNDWATER RESULTS
MW-4 (RHCD04)
Hunting Ridge Construction and Demolition Debris La

QUARTER	UNITS	2018Q1	2018Q3	2019Q1	2019Q3	2020Q1	2020Q3
Water Quality							
Water Elevation	Feet	18.96	18.42	19.63		17.72	
Electrical Conductance (Field)	UMHOS/CM	83	84	71	78	79	73
Electrical Conductance (25°C) (Lab Test	UMHOS/CM	91.5	96.9	98.1	87	220	322
pH (Field)	S.U.	4.85	4.53	4.89	4.12	4.61	3.92
pH (Lab Test)	S.U.	5.26	4.94	6.12	5.55	5.00	6.65
Turbidity (Field)	N.T.U.	3.6	1.2	9.9	171	504	789
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/						
Alkalinity, Total (As CaCO3)	MGCACO3/	3.9	4.4	2.5	3.1	5.0	6.0
Alkalinity, Carbonate (As CaCO3)	MGCACO3/						
Anion/Cation Balance	MG/L						
Chemical Oxygen Demand (COD)	MG/L	5.3	ND	5	ND	ND	ND
Chloride	MG/L	3.8	3.2	3.1	3.4	3.5	3.5
Nitrate (As N)	MG/L	0.7	1.3	1.2	1.4	2.04	2.99
Sulfate	MG/L	23.1	24	26.6	19.1	22.5	19.3
Total Hardness (As CaCO3)	MG/L	28	24	28	28	29.4	31.7
Total Dissolved Solids (TDS)	MG/L	50	63	60	57	68	68
Total Organic Carbon	MG/L						
Total Organic Halogen (TOX)	MG/L						
Metals							
Antimony, Total	MG/L						
Arsenic, Total	MG/L	ND	ND	0.01	0.00062	ND	ND
Arsenic, Dissolved	MG/L						
Barium, Total	MG/L	0.15	0.14	2	0.16	0.133	0.174
Barium, Dissolved	MG/L						
Beryllium, Total	MG/L						
Cadmium, Total	MG/L	0.00041	ND	0.00500	0.00025	0.003	0.005
Cadmium, Dissolved	MG/L						
Calcium, Total	MG/L	1.8	1.9	2.4	2.4	2.72	2.62
Calcium, Dissolved	MG/L						
Cobalt, Total	MG/L						
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L						
Chromium, Total	MG/L	ND	0.0007	0.0015	0.0092	ND	0.007
Chromium, Dissolved	MG/L						
Iron, Total	MG/L	0.14	ND	0.94	7.6	1.61	5.68
Iron, Dissolved	MG/L						
Lead, Total	MG/L	0.0002	ND	0.0003	0.0017	0.005 J	0.0023
Lead, Dissolved	MG/L						
Magnesium, Total	MG/L	5.7	5.1	5	5.3	5.49	6.12
Magnesium, Dissolved	MG/L						
Manganese, Total	MG/L	0.96	0.80	0.66	0.75	0.719	0.945
Manganese, Dissolved	MG/L						
Mercury, Total	MG/L	ND	ND	ND	0.00017	ND	ND
Mercury, Dissolved	MG/L						
Nickel, Total	MG/L	0.0037	ND	0.0028	0.0053	ND	ND
Potassium, Total	MG/L	3.4	3	2.6	2.9	2.5	3.0
Potassium, Dissolved	MG/L						
Sodium, Dissolved	MG/L						
Sodium, Total	MG/L	2.2	2	1.7	1.9	1.9	2.2
Silver, Total	MG/L						
Selenium, Total	MG/L						
Selenium, Dissolved	MG/L						
Thallium, Total	MG/L						
Vanadium, Total	MG/L						
Zinc, Total	MG/L	0.015	0.012	0.013	0.025	0.014	0.018
Zinc, Dissolved	MG/L						
VOCs							
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	0.39	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L						
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L						
1,3-Dichloropropene	UG/L						
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L						
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L						
Acetone	UG/L	ND	ND	ND	ND	ND	ND
Acrolein	UG/L						
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L	ND	ND	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND
Chloroform	UG/L		0.53	1.5	0.4	0.5	0.6
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L						
Diethyl ether	UG/L						
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L						
Methyl Tert-Butyl ether	UG/L	ND	ND	ND	0.49	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L						
Styrene	UG/L	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L						
Toluene	UG/L	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-5 (RHCD05)

Hunting Ridge Construction and Demolition Debris Landfill, Hurlock, Maryland

QUARTER	UNITS	1994Q2	1994Q3	1995Q1	1995Q3	1996Q1	1996Q3	1997Q1	1997Q2	1997Q3	1998Q1	1998Q2	1998Q3	1999Q1	1999Q3	2000Q1	2000Q3	2001Q1	2001Q3	2002Q1	2002Q3	2003Q1	2003Q4	2004Q1	2004Q3	2005Q1	2005Q3	2006Q1	2006Q3	2007Q1	2007Q3	2008Q1	2008Q3	2009Q1	2009Q3	2010Q1	2010Q3
Water Quality																																					
Water Elevation	Feet																							19.09	18.3	18.97	17.55		18.27	19.02	17.13	17.82	16.53	17.67	18.09	19.9	17.79
Electrical Conductance (Field)	UMHOS/CM																			377	380	337	333	311	314	289	290	264	261	256	329	253	261	253	285	276	299
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	253	260	280	289	310	283	293	289	304	290		316	348	387	401	374	407	357	376	351	324	301	312	264	313	310	245	286	286	288	13.2	289	307	255		
pH (Field)	S.U.																			5.57	5.54	5.62	5.5	5.24	5.29	5.39	5.17	5.24	5.23	5.54	4.8	5.35	5.73	5.25	5.53	5.43	5.24
pH (Lab Test)	S.U.	4.75	4.68	4.68	4.66	4.72	4.7	4.66	4.33	4.7	4.79		4.38	4.19	4.24	4.63	5.57	5.76	5.7	5.58	5.52	5.12	5.71	5.7	5.63	5.77	5.24	5.51	5.1	5.56	4.74	5.84	5.74	5.76	5.63	6.14	5.7
Turbidity (Field)	N.T.U.																			1.2	170	4.2	16.5	4.6	1.9	1.3	0.56	0.36	1.9	1.9	0.44	0.35	1.9	ND	1	0	0
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		0.03	0.023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/													ND	ND	8.1	23.8	35.2	15																		
Alkalinity, Total (As CaCO3)	MGCACO3/													ND	ND	8.1	23.8	35.2	15	18.8	12.4	4.4	14.9	12.1	12.1	13.1	7.5	10.1	7.6	11.1	ND	6.5	14.7	12.4	18.6	18.1	7.2
Alkalinity, Carbonate (As CaCO3)	MGCACO3/	ND	ND	ND	1	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND																		
Anion/Cation Balance	MG/L													0	0	0	0	0	0																		
Chemical Oxygen Demand (COD)	MG/L	ND	ND	ND	ND	ND	7	7		ND	ND		ND	ND	ND	ND	14.3	17.1	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	14.2	12.3	ND	10.3	10.3				
Chloride	MG/L	23.1	23.1	27	26.8	25.1	26.3	26.6	25.9	26.6	27		29.2	28.2	33.6	33.8	33.1	42.4	35.7	35.7	36.8	28.9	30.5	35.6	30.2	31.9	32.5	29.1	28.2	27.2	28.5	29.8	27.8	28.8	28.5	27.7	28.3
Nitrate (As N)	MG/L	17.2	18.5	22	20.9	19.1	19.6	19.9	19.7	21.9	22		25	25.6	26	28.4	27.1	23	26.6	31.4	26.7	31.1	24	21.6	19.1	25.2	27.1	19.8	17.6	19.2	21.1	20.7	22.7	23.8	32.7	19	18.7
Sulfate	MG/L	ND	1.8	2.4	ND	ND	ND	1.1	ND	1.6	ND		7.7	ND	2.1	ND	ND	10.8	17.2	1.5	ND	ND	5.8	ND	ND	ND	ND	ND	2.2	1.8	ND	ND	1.6	3.84	2.57	ND	ND
Total Hardness (As CaCO3)	MG/L	71.8	81.8	94.8	92.4	81.3	90.8	97.9		85.7	94.4		98.3	169	118	150	123	123	118	105	116	105	127	116	200	96	104	80.4	80.1	55.9	100	67.2	96.7	98.1	77.9	80	88
Total Dissolved Solids (TDS)	MG/L																			86	198	194	204	214	195	211	140	161	179	206	206	162	153	178	173	144	127
Total Organic Carbon	MG/L																																				
Total Organic Halogen (TOX)	MG/L	7	ND	ND	ND	10	ND	ND		18	54		30	58.7	68.1	39.7	65.2	118	65.6																		
Metals																																					
Antimony, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																														
Barium, Total	MG/L	1.84	1.81	1.98	2.12	2.05	2.16	2.2	2.14	2.17	2.24		2.46	2.2	2.5	2.7	2.5	2.4	2.3	2.3	2.2	2.3	2	2.2	2.1	2	1.9	2	1.7	1.7	2	1.7	1.6	1.71	1.55	1.59	1.71
Barium, Dissolved	MG/L	1.69	1.73	2.24	2.03	1.96	2.16																														
Beryllium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																														
Calcium, Total	MG/L	5.59	5.83	6.51	6.1	4.92	5.69	5.8	5.87	5.7	6		6.4	15.7	7.2	8	7.4	7.4	6.8	6.8	6.5	7	6	6.3	6	5.3	5.4	4.7	3.9	4.2	5.3	4.7	4.4	4.66	4	4.1	4.6
Calcium, Dissolved	MG/L	5	5.7	6.3	5.5	4.8	5.9	6.1	6.23	5.83	5.91		6.15	6.8	7.8	8	7.3	6.9	7.2																		
Cobalt, Total	MG/L																			0.029	0.026	0.02	0.034	0.023	0.022	0.03	0.02	0.024	0.04	0.029	0.018	0.03	0.024	0.0243			
Copper, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																																				
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																														
Iron, Total	MG/L							ND		0.0534	0.0718		ND	0.24	ND	4.1	3.8	5.3	8.4	9.7	15.5	5.6	8.4	3.7	2.6	3.6	0.51	1.7	1.9	1.9	1.8	1.6	0.39	0.603	0.518	0.838	2.34
Iron, Dissolved	MG/L	ND	0.03	ND	ND	ND	ND																														
Lead, Total	MG/L	0.0015	ND	0.0009	ND	ND	ND	0.00097		ND	ND		0.0009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Dissolved	MG/L	ND	ND	ND	ND	ND	ND																														
Magnesium, Total	MG/L	16.1	16.8	18.9	19	15.5	15.5	20.3	18.7	17.3	19.3		20	21.4	23.5	24.5	24	22.2	21.4	21.7	20.7	21.4	18.7	20.6	19.6	18.7	18.8	17.5	16.1	16.8	20.3	18.6	18.4	18.5	16.4	16.6	18.5
Magnesium, Dissolved	MG/L	14.4	16.4	19.2	19.1	15.5	18.5	17.1	19.5	17.7	18.1		20.7	22	23.4	25.2	23.4	21.1	22.6																		
Manganese, Total	MG/L							0.202	0.212	0.213	0.242		0.266	0.32	0.72	0.84	0.97	3.7	0.89	1	0.92	0.65	0.95	0.69	0.62	0.87	0.7	0.81	1.3	0.9	0.69	1.2	1.3	1.29	1.12	1.1	1.16
Manganese, Dissolved	MG/L	0.147	0.164	0.201	0.187	0.175	0.206																														
Mercury, Total	MG/L	ND	0.00006	0.00018	0.00013	0.00016	0.00022	0.00037		0.00051	0.0005		0.00046	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0002	ND	ND	ND	ND	0.00022	0.00036	ND	ND	0.00027	0.0003	0.0002	0.0004
Mercury, Dissolved	MG/L	ND	0.00006	0.00019	0.00015	0.00016	0.00021																														
Nickel, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	7.92	7.14	8.96	10.2	8.09	8.03	8.4	8.43	7.84	8.84		10.5	8.4	9.2	9.7	9	8.8	9.3	8	8.5	9.1	7.8	8.3	8.3	8.3	7.3	7.2	6.8	6.7	8	7	6.6	6.99	6.33	6.68	6.56
Potassium, Dissolved	MG/L	7.26	6.8	8.66	7.87	7.02	7.8	6.6	7.88	8.21	7.72		8.88	8.9	10.9	9.2	9.8	9.4	9.3																		
Sodium, Dissolved	MG/L	3.63	4.6	3.92	3.95	3.23	3.55	3.57	4.15	4.58	5.64		5.84	5.3	8.4	8	7.5	9.6	9.2																		
Sodium, Total	MG/L	4.02	4.99	4.5	3.42	3.57	3.97	3.84	4.67	4.3	5.33		5.59	18.9	6.7	8.3	7.5	9.6	9.3	10.2	10.9	10.2	9.7	8.3	7.2	10.3	7.6	10.3	10.1	10.4	7.3	9.8	10.3	9.93	11.6	10.3	8.2
Silver, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Selenium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Selenium, Dissolved	MG/L																																				
Thallium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Vanadium, Total	MG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Zinc, Total	MG/L	0.0097	0.0133	0.0199	0.0202	ND	ND	0.0118		0.012	0.0119		0.0154	0.041	0.02	ND	ND	ND	ND	0.013	0.011	0.014	0.017	0.011	0.014	0.01	0.01	ND	0.01	0.012	0.011	0.012	ND	ND	ND	ND	ND
Zinc, Dissolved	MG/L	0.0073	0.0099	0.0144	0.0103	ND	0.0111																														
VOCs																																					
1,1,1,2-Tetrachloroethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	0.4		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		0.2	0.6		0.4	ND	ND	ND	ND	ND	ND	1.5	1.4	2.4	1.6	1.6	1.2	2	0.97	1.1	1.2	1.4	0.78	1.1	1.3	1.1	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	2		2	8	6	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	4	ND	3.2	ND	ND	ND	2.1	1.1	
1,2,3-Trichloropropane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L																			ND														ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,2-Dibromoethane (EDB)	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND (<5)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND (<5)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																																				
1,3-Dichloropropene	UG/L	ND	ND	ND	ND																																
1,4-Dichlorobenzene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	2	2	2	2	2	2	2		2	2		2	ND	ND	ND	ND	ND	ND																		
2-Hexanone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																																				
Acetone	UG/L																			6.3	5.7	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L	14	1	1	1	1	2	2		2	2		2	ND	ND	ND	ND	ND	ND																		
Acrylonitrile	UG/L	10	2	2	2	2	2	2		2	2		2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31	0.31	0.29	0.39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L																																	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	0.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L																			ND	ND	ND	ND	0.36	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L					ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.76			
Dichlorodifluoromethane	UG/L																																				
Diethyl ether	UG/L								ND																												
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																			0.42	ND	ND	0.96	0.86	1												
Methyl Tert-Butyl ether	UG/L																			0.42						1.1	0.65	0.86	1.2	1.2	0.67	0.99	0.94	ND	ND	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND		0.3	0.7		0.7	ND	ND	ND	ND	ND	ND	1.8	2.1	5.4	2	2.8	2.2	3.9	1.6	2.2	2	2.3	1.5	1.6	1.5	1.6	ND	1.6	1.2
p-Dioxane	UG/L								ND																												
Styrene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L								ND																												
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																																				
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L					ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	0.2		0.3	ND	ND	ND	ND	ND	ND	ND	0.24	0.32	ND	ND	ND	0.51	ND	ND	ND	ND	ND	ND	0.56	ND	ND	ND	ND
Trichlorofluoromethane	UG/L																			0.9	1.4	1.6	1.6	1.2	1.4	3.2	0.93	1.8	ND	1.7	0.73	ND	2.8	1.7	2.7	ND	ND
Vinyl acetate	UG/L																			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND	ND		ND	1		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9	22	5	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-5 (RHCD05)

Hunting Ridge Construction and Demolition Debris L

QUARTER	UNITS	2011Q1	2011Q3	2012Q1	2012Q3	2013Q1	2013Q3	2014Q1	2014Q3	2015Q1	2015Q3	2016Q1	2016Q3	2017Q1	2017Q3	2018Q1	2018Q3	2019Q1	2019Q3	2020Q1	2020Q3
Water Quality																					
Water Elevation	Feet	17.77	16.81	18.49					16.94	18.86	17.42	18.59	18.28	18.07	17.81	18.72	18.49	20.16		18.26	
Electrical Conductance (Field)	UMHOS/CM	269	267	310	228	265	254	332	274	237	90	235	125	167	256	208	211	174	198	184	158
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM									249	235	176	116	226	238	224	241	232	227	220	222
pH (Field)	S.U.	5.01	5.06	5	6.37	5.14	5.15	5.15	4.81	5.33	5.25	5.35	4.83	5.08	4.91	5.23	4.79	5.21	4.28	5.00	4.59
pH (Lab Test)	S.U.	6.4	5.9	5.38	6.06	5.98	6.05	5.65	5.57	5.53	5.88	5.47	5.35	4.59	5.46	5.6	5.32	5.3	5.75	5.32	5.69
Turbidity (Field)	N.T.U.	36	0	0	0	51.1	0	0	0	8.4	432	37.7	4.8	0	0	ND	0.4	2.1	1.2	0.0	0.0
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.19	0.29	0.11	ND	0.17	0.31	0.11	0.088	0.065	0.091	0.19	0.32
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/																				
Alkalinity, Total (As CaCO3)	MGCACO3/	14.2	14.5	14.1	15.8	12.4	10	6.5	9.6	9.0	12.8	2.4	2.1	ND	2.7	5.3	2.5	4.2	4.1	7.0	8.0
Alkalinity, Carbonate (As CaCO3)	MGCACO3/																				
Anion/Cation Balance	MG/L																				
Chemical Oxygen Demand (COD)	MG/L																				
Chloride	MG/L	26.8	26.1	25.8	25.8	25.5	24.9	24.9	25.9	23.7	25.0	20.2	20.2	19.4	20.2	21.2	24.7	24.3	25.2	24.3	24
Nitrate (As N)	MG/L	18.4	20.3	22.9	16.3	16.5	15.1	16.8	16.7	19.5	14.5	0.11	17	15.4	16.7	14.6	16.3	13.8	14.6	15.8	13.5
Sulfate	MG/L	5.6	ND	3.5	ND	6.6	ND	1.7	ND	2.0	2.1	1.1	0.46	1.2	0.66	2.2	0.95	1.9	ND	0.9	0.9
Total Hardness (As CaCO3)	MG/L	84	82.8	76	80	69.7	72	78	72	80	72	75	80	68	72	72	68	60	80	65.8	71.1
Total Dissolved Solids (TDS)	MG/L	151	188	177	128	141	187	130	112	119	139	120	136	123	132	166	123	110	131	124	116
Total Organic Carbon	MG/L																				
Total Organic Halogen (TOX)	MG/L																				
Metals																					
Antimony, Total	MG/L				ND	ND	ND	ND	ND												
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0029	0.00058	ND	0.00037	ND	0.00043	0.00052	ND	ND	ND	ND
Arsenic, Dissolved	MG/L																				
Barium, Total	MG/L	1.6	1.6	1.4	1.4	1.4	1.4	1.4	1.2	1.3	1.2	1.4	1.4	1.4	1.3	1.4	1.4	1.2	1.2	1.27	1.38
Barium, Dissolved	MG/L																				
Beryllium, Total	MG/L				ND	ND	ND	ND	ND												
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0004	0.00041	0.00035	0.00035	0.00042	0.00055	0.00036	0.00027	0.00032	0.003	0.003
Cadmium, Dissolved	MG/L																				
Calcium, Total	MG/L	3.9	4.1	3.5	3.6	3.7	3.6	3.6	3.1	3.4	3.3	3.5	3.5	3.4	3.3	3.4	3.5	3.4	3.3	3.27	3.49
Calcium, Dissolved	MG/L																				
Cobalt, Total	MG/L				0.024																
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0076	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																				
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0013	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L																				
Iron, Total	MG/L	0.27	0.039	0.062	ND	1.7	0.043	0.16	0.028	0.038	71.8	3.2	0.97	0.075	0.2	0.15		0.093	0.049	0.06	ND
Iron, Dissolved	MG/L																				
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0045	0.0013	0.00085	0.00067	0.00049	0.00052	0.00054	0.0006	0.00037	0.003	0.004
Lead, Dissolved	MG/L																				
Magnesium, Total	MG/L	17.9	18.9	14.9	16.1	14.1	15.7	15.2	15	14.1	12.3	14.4	14.9	14.9	13.6	15.1	14	13.5	14.3	14	15.2
Magnesium, Dissolved	MG/L																				
Manganese, Total	MG/L	1.4	1.5	1.4	1.4	1.1	1.2	1.2	1.3	1.3	1.7	0.92	0.75	1.2	1.1	1.2	1.1	1	1.4	1.3	1.57
Manganese, Dissolved	MG/L																				
Mercury, Total	MG/L	0.00021	0.00026	ND	0.00027	0.00028	0.00025	0.00064	0.00046	0.00041	0.0011	0.00052	0.00037	0.00065	0.00059	0.00033	0.00022	0.00033	0.00042	0.0004	0.0001
Mercury, Dissolved	MG/L																				
Nickel, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.0022	0.0022	0.0018	ND	ND	ND	ND	ND	0.0016	ND	ND
Potassium, Total	MG/L	6.2	6.5	5.9	6.2	6.5	5.9	5.9	5.5	5.8	6.7	5.8	6	6.6	6	6.4	6	5.7	5.2	5.8	5.6
Potassium, Dissolved	MG/L																				
Sodium, Dissolved	MG/L																				
Sodium, Total	MG/L	10.4	8.7	10	9.8	11.7	9	7.8	7.2	8.3	10.8	6.4	5.2	6.7	5.8	7	6	5.9	5.6	6.8	6.0
Silver, Total	MG/L				ND	ND	ND	ND	ND												
Selenium, Total	MG/L				ND	ND	ND	ND	ND												
Selenium, Dissolved	MG/L																				
Thallium, Total	MG/L				ND	ND	ND	ND	ND												
Vanadium, Total	MG/L				ND	ND	ND	ND	ND												
Zinc, Total	MG/L	ND	ND (<0.01	0.01	ND	ND	ND	ND	ND	0.0086	0.26	0.011	0.0096	0.0096	0.0046	0.0076	0.0097	0.0085	0.011	0.008	0.007
Zinc, Dissolved	MG/L																				
VOCs																					
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	3.2	3.7	ND	3.4	2.3	ND	ND	1.9	0.39	1.5	ND	0.73	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L																				
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																				
1,3-Dichloropropene	UG/L																				
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L																				
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																				
Acetone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L																				
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L	10.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																				
Diethyl ether	UG/L																				
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methyl tert butyl ether	UG/L																				
Methyl Tert-Butyl ether	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.66	0.66	0.44	ND	0.4	0.2	0.37	0.18	0.33	0.43	0.6	ND
Methylene chloride	UG/L	1.4	1.4	2.1	1.3	1.5	1.2	ND	ND	ND	0.86	0.75	ND	ND	ND	ND	ND	ND	ND	0.6	ND
p-Dioxane	UG/L																				
Styrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L																				
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	4.9	ND	2.6	ND	ND	1.6	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-6 (RHCD06)

Hunting Ridge Construction and Demolition Debris Landfill, Hurlock, Maryland

QUARTER	UN TS	1994Q2	1994Q3	1994Q4	1995Q1	1995Q3	1995Q4	1996Q1	1996Q3	1997Q1	1997Q2	1997Q3	1998Q1	1998Q3	1999Q1	1999Q3	2000Q1	2000Q3	2001Q1	2001Q3	2002Q1	2002Q3	2003Q1	2003Q4	2004Q1	2004Q3	2005Q1	2005Q3	2006Q1	2006Q3	2007Q1	2007Q3	2008Q1
Water Quality																																	
Water Elevation	Feet																								19.59	18.68	19.3	17.85		19.8	19.48	18.45	17.96
Electrical Conductance (Field)	UMHOS/CM																				440	430	413	515	583	492	470	491	469	474	506	540	360
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	408	1490	1150	820	682	683	610	755	743	1002	1010	652	859	608	520	664	667	569	551	446	391	361	494	619	338	490	508	353	504	538	421	356
pH (Field)	S.U.																				6.07	6.37	6.41	6.26	6.29	6.3	6.5	6.53	6.2	6.28	6.64	6.27	6.3
pH (Lab Test)	S.U.	6.11	6.34	6.2	6.3	6.62	6.31	6.03	5.97	5.99	6.08	6.14	6.19	6.07	5.99	5.72	6.25	6.24	6.73	6.34	6.37	6.14	6.18	6.36	6.73	6.69	6.79	6.58	6.47	6.11	6.55	6.28	6.78
Turbidity (Field)	N.T.U.																				55.2	57.3	6.2	108	9.5	1.9	40.7	68.6	24.3	1.9	1.9	3.9	3.7
Ammonia (As N)	MG/L	0.09	0.45	0.16	0.71	1.51	1.52	1.43	1.07	0.65		0.86	0.61	1.24	0.71	0.98	1.2	1.4	1.1	0.9	ND	ND	ND	2.7	3.2	1.1	ND	ND	ND	ND	ND	ND	ND
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/														193	144	196	244	199	198													
Alkalinity, Total (As CaCO3)	MGCACO3/														193	144	196	244	199	198	168	118	103	199	190	102	144	151	109	138	176	172	86.7
Alkalinity, Carbonate (As CaCO3)	MGCACO3/	92	317	354	297	237	196	173	192	199	206	250	195	266	ND	ND	ND	ND	ND	ND													
Anion/Cation Balance	MG/L														0	0	0	0	0	0													
Chemical Oxygen Demand (COD)	MG/L	86	981	520	155	112	89	67	129	175		153	91	95	39	18.3	38.2	30.2	31.6	24.7	ND	12.3	ND	10.1	24.6	21.3	17.1	24.5	ND	ND	30.3	20.5	ND
Chloride	MG/L	38.5	115	121	77.1	68.8	70.6	62.5	80.5	83.2	89.6	104	74	77.4	52.7	50.5	58.4	58.1	54.4	47.4	32.9	30	26.5	39.3	52.5	42.7	42.6	46.2	44.5	43.1	44.6	42	37.1
Nitrate (As N)	MG/L	8.25	0.75	ND	1.13	0.4	2.98	0.02	0.72	0.36	0.25	0.06	1.34	0.26	3.1	6.2	4.7	3.7	3.5	2.8	2.5	7.1	9.9	4.1	4.4	3.7	8.4	4.4	8.1	6.1	4.3	3.1	9.5
Sulfate	MG/L	8.4	18.6	3.5	10.8	5	2.7	6.1	41.3	47.9	45.8	41.9	34.3	47.1	21.8	20.7	24	23.5	33.6	26.6	9.6	11.8	10.8	13.2	18.9	12.7	13.4	13.2	10.7	12.3	22.1	19.6	11.9
Total Hardness (As CaCO3)	MG/L	107	534	384	331	228	190	169	187	195		186	212	219	315	203	226	221	194	200	163	144	168	230	204	200	164	178	110	83.2	52	100	150
Total Dissolved Solids (TDS)	MG/L																				208	222	194	301	315	251	283	244	228	271	265	363	202
Total Organic Carbon	MG/L																																
Total Organic Halogen (TOX)	MG/L	89	195	130	63	95	116	107	156	136	116	109	93	75	88	64	110	159	98.5	66.7													
Metals																																	
Antimony, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	MG/L	ND	0.003	0.0007	0.0058	0.0058	0.0041	0.0043	0.0079	0.006		0.0067	0.0157	0.0082	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Dissolved	MG/L	ND	0.0036	0.005	0.0088	0.0053	0.0041	0.0046	0.0057																								
Barium, Total	MG/L	0.837	0.86	0.675	0.294	0.375	0.451	0.348	0.549	0.587		0.517	0.448	0.462	0.32	0.61	0.47	0.4	0.32	0.29	0.17	0.22	0.31	0.39	0.44	0.34	0.34	0.36	0.42	0.43	0.48	0.48	0.36
Barium, Dissolved	MG/L	0.0358	0.958	0.698	0.31	0.36	0.459	0.335	0.562																								
Beryllium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	MG/L	ND	ND	0.0065	ND	ND	0.0044	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L	ND	0.0035	0.0074	ND	ND	0.006	ND	ND																								
Calcium, Total	MG/L	16.2	38.2	41.8	49	34.6	26.6	21.8	21.3	15.4	14.6	13.8	12.6	15	39	10.2	12.7	11.8	9.7	9.6	8.6	8.6	10.1	13.7	13.6	13.3	12.9	14.4	14.4	14.7	16.4	16.1	14.5
Calcium, Dissolved	MG/L	14.9	42.2	39.4	46.5	31.9	28.6	24.3	21.7	14.6	16	15.6	12.2	14.5	12.6	11.1	12.5	10.9	9.8	9.8													
Cobalt, Total	MG/L																				0.02	0.02	0.024	0.029	0.025	0.02	0.019	0.019	0.022	0.019	0.02	0.026	0.016
Copper, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																																
Chromium, Total	MG/L	ND	7.3	ND	ND	5.1	ND	ND	ND	6.4		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L	ND	5.7	3.9	ND	4.2	ND	ND	ND																								
Iron, Total	MG/L									112	115	91.8	63.5	52.8	29.8	18.9	22.5	31.7	31.4	22.3	12.3	17.1	13.9	17.8	22	17	16.4	15.5	18.8	10.4	13.8	26.6	9.2
Iron, Dissolved	MG/L	18.6	322	244	116	135	107	117	156																								
Lead, Total	MG/L	ND	ND	0.0048	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	0.0077	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Dissolved	MG/L	ND	ND	ND	ND	ND	ND	ND	ND																								
Magnesium, Total	MG/L	17.2	92.6	76.2	53.3	34	30.9	24.6	31.5	37.9	37.7	36.8	43.7	44	38.5	35.9	46	50	39.9	39.3	31.5	25.7	25.7	33.8	34.6	30.2	29.2	29.6	28	26.7	29	26.9	21.6
Magnesium, Dissolved	MG/L	17	104	69.3	52.2	35.9	28.9	30	32.2	33.2	41.6	39.9	37.5	46	41.5	36.8	45.9	45.3	40.8	38.4													
Manganese, Total	MG/L									18.6	17.6	12	14.3	13.4	10.9	11	14.6	11.1	9.2	9.3	11.8	13.1	13.4	15.4	10.6	11.3	12.3	12.4	12.5	15.5	12.6	11.1	12.4
Manganese, Dissolved	MG/L	21.8	34.6	25.1	11.8	10.8	9.55	8.58	17.5																								
Mercury, Total	MG/L	0.00022	0.00007	0.00012	0.00014	ND	ND	ND	ND	0.00011		ND	ND	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury, Dissolved	MG/L	0.00022	0.00005	0.00009	0.00009	ND	ND	ND	ND																								
Nickel, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	5.6	4.25	3.98	6.28	4.77	4.61	4.9	6.16	6	6.69	5.59	5.73	6.46	5.5	6.4	6.4	6.1	5.5	5.6	3.9	4.6	5.7	6.4	6.6	5.9	5.8	5.7	5.8	6.4	6.8	7.2	6
Potassium, Dissolved	MG/L	5.22	3.81	3.63	6.43	4.76	4.84	4.48	5.86	3.9	5.74	5.71	5.69	6.84	5.8	7.6	7.2	5.7	6.1	5.5													
Sodium, Dissolved	MG/L	9.71	72.3	51.7	40.4	40.3	37.9	23.1	35.2	50	58.6	73.4	56.7	69	37	31.3	40.6	40.3	35.2	36.3													
Sodium, Total	MG/L	10.7	65.8	54.1	39.5	39.8	34	26.8	34.7	55	54.9	60.8	55.2	67.6	37.7	28.8	37.8	42.6	34.6	36.3	24.4	16.2	17.6	28.8	31.6	24.3	24.2	23.2	23.1	26.3	30.8	30.4	19
Silver, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Dissolved	MG/L																																
Thallium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	MG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	MG/L	0.0188	ND	0.0178	0.0126	0.0129	0.0114	ND	0.0155	0.0101		ND	ND	ND	0.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Dissolved	MG/L	0.0146	ND	0.0214	0.0109	ND	ND	0.0176	ND																								
VOCs																																	
1,1,1,2-Tetrachloroethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	0.9	0.8	ND (<5)	0.4	ND (<5)	0.7	0.7	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	0.5	0.3	ND	ND	ND	ND	ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	5	12	11	4	5	7	6	12	7	7	7	5	6	ND	ND	ND	ND	ND	ND	1.2	1.2	ND (<1)	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	0.5	0.3	ND	0.3	0.3	ND	0.4	0.3		0.3	0.4	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L																				ND												
1,2-Dibromo-3-Chloropropane DBCP	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	0.4	0.6	ND	0.3	0.4	0.6	2	0.8		1	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	20	ND	ND	ND	ND	0.2	ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																																
1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND																										
1,4-Dichlorobenzene	UG/L																				ND	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L	2	2	2	2	2	2	2	2	2		2	2	2	ND	ND	ND	ND	ND	ND													
2-Hexanone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																																
Acetone	UG/L																				ND	8	ND	ND	3.4	ND	ND	ND	ND	2.9	3.8	2.5	2.3
Acrolein	UG/L	14	2	1	1	1	1	1	2	2		2	2	2	ND	ND	ND	ND	ND	ND													
Acrylonitrile	UG/L	10	2	2	2	2	2	2	2	2		2	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	0.3	2	1	0.9	1	1	0.8	2	2		2	1	1	ND	ND	ND	ND	ND	ND	0.43	0.48	ND	0.64	0.74	0.58	0.66	0.88	0.46	0.51	ND	0.52	ND
Bromochloromethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L																																
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	0.2	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	6	8	6	5	5	2	5	4		4	3	ND	ND	ND	ND	ND	ND	ND	0.29	0.56	ND	0.69	ND	ND	ND	0.53	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	3	1	0.3	0.3	ND	ND	0.2	0.4		ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	2	4	ND	ND	ND	ND	ND	0.4		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L																				ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L							ND	ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.1		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	0.2	ND	ND	ND	ND	ND	ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																																
Diethyl ether	UG/L										6																						
Ethylbenzene	UG/L	ND	6	4	3	2	2	0.9	2	1		2	0.6	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																				0.34	0.31	ND	0.72	1.1	0.6							
Methyl Tert-Butyl ether	UG/L																				0.34						0.59	1.2	0.87	1.3	1.4	1.1	0.57
Methylene chloride	UG/L	2	7	4	3	3	3	1	2	1		2	1	1	ND	ND	ND	ND	ND	ND	0.45	0.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L										14																						
Styrene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	0.3	ND	ND	ND	ND	ND	0.4	0.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L										110																						
Toluene	UG/L	ND	15	9	3	2	1	0.6	1	0.9		0.8	0.3	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L																																
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	0.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L							ND	ND	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	0.4	0.4	ND	0.2	0.2	ND	ND	0.2		0.2	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L																				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	0.9	1	ND	0.9	ND	ND	ND	3	4	4	2	ND	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	ND	ND	0.86	ND	5.4	ND

APPENDIX E

HISTORICAL GROUNDWATER RESULTS

MW-6 (RHCD06)

Hunting Ridge Construction and Demolition Debris Landfill, Hurl

QUARTER	UN TS	2008Q3	2009Q1	2009Q3	2010Q1	2010Q3	2011Q1	2011Q3	2012Q1	2012Q3	2013Q1	2013Q3	2014Q1	2014Q3	2015Q1	2015Q3	2016Q1	2016Q3	2017Q1	2017Q3	2018Q1	2018Q3	2019Q1	2019Q3	2020Q1	2020Q3
Water Quality																										
Water Elevation	Feet	16.64	17.73	18.53	20.35	18.14	17.88	17.02	18.82					17.41	19.13	17.71	18.85	18.35	18.47	18.18	19	18.89	20.55		17.66	
Electrical Conductance (Field)	UMHOS/CM	359	327	380	367	574	398	461	643	500	396	426	656	607	411	373	280	168	268	369	313	284	365	392	294	253
Electrical Conductance (25°C) (Lab Test)	UMHOS/CM	378	430	321											406	401	375	1.16	360	340	332	387	454	427	347	173
pH (Field)	S.U.	6.21	6.32	5.72	6.21	6.44	5.76	5.61	5.92	7.55	6.16	6.36	6.25	5.83	6.67	5.91	6.45	6.71	6.38	6.22	6.58	6.31	6.59	6.44	6.32	6.21
pH (Lab Test)	S.U.	6.54	6.5	6.21	6.87	6.78	7.16	6.21	6.18	6.82	6.91	6.81		6.89	6.51	6.36	6.7	6.35	7.13	6.73	6.74	6.38	6.31	7.13	6.60	6.65
Turbidity (Field)	N.T.U.	1.9	3.09	4	1	0	0	153	0	0	116	1.6	0.3	0	54.2	60.3	16	2.5	1.3	0.1	21.3	2	1.6	7.1	19.3	7.6
Ammonia (As N)	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30	0.18	0.09	0.23	0.011	0.13		0.29	0.72	0.27	0.26
Alkalinity, Bicarbonate (As CaCO3)	MGCACO3/																									
Alkalinity, Total (As CaCO3)	MGCACO3/	89	84.8	86.3	81.8	200	116	135	183	156	87.2	112	122	226	123	155	114	81.4	114	81.4	101	112	157	150	109	102
Alkalinity, Carbonate (As CaCO3)	MGCACO3/																									
Anion/Cation Balance	MG/L																									
Chemical Oxygen Demand (COD)	MG/L	16.8									ND	13.8	ND	20.3	ND	9.2		13.4	ND	ND	6.5		19.4	12	5.0	ND
Chloride	MG/L	35	34.2	33	31.4	46	41.5	43.3	54	53.1	31.4	41	39.4	45.8	31.9	39.0	26.4	24.0	27.8	25.2	25.7	32.8	38.0	36.6	29.4	30.7
Nitrate (As N)	MG/L	9.9	11.2	18.2	11	2.49	3.7	4.1	3.8	1.5	7.6	3	4.0	1.2	6.0	2.0	5.5	9.0	4.5	5.4	5.6	5.3	2.3	1.5	4.16	4.02
Sulfate	MG/L	14.4	14	12.3	9.8	20	23.3	16.1	18	27.5	17.4	27.3	25.1	26.8	13.6	13.7	10	5.4	7.3	7.7	7.3	8.6	11.5	9.1	8.3	6.2
Total Hardness (As CaCO3)	MG/L	1200	124	145	116	177	156	290	160	200	110	144	200	196	220	192	164	144	132	120	112	136	176	156	117	121
Total Dissolved Solids (TDS)	MG/L	191	186	242	134	275	243	266	306	305	126	359	151	289	195	233	208	170	180	177	125	226	245	225	170	180
Total Organic Carbon	MG/L																									
Total Organic Halogen (TOX)	MG/L																									
Metals																										
Antimony, Total	MG/L	ND	ND							ND	ND	ND	ND	ND												
Arsenic, Total	MG/L	ND	ND	ND	ND	ND	ND	0.041	ND	ND	ND	ND	ND	ND	0.0042	0.10	0.0032	0.0013	0.0014	0.0005	0.0025	0.0005	0.0006	0.0006	0.003	0.008
Arsenic, Dissolved	MG/L																									
Barium, Total	MG/L	0.35	0.328	0.316	0.379	0.582	0.49	0.5	0.55	0.57	0.35	0.47	0.4	0.39	0.30	0.63	0.34	0.43	0.38	0.31	0.38	0.4	0.48	0.5	0.328	0.338
Barium, Dissolved	MG/L																									
Beryllium, Total	MG/L	ND	ND							ND		ND	ND	ND												
Cadmium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Dissolved	MG/L																									
Calcium, Total	MG/L	14.2	14	13.9	14	20.1	15.9	17.4	20.4	24.2	15.6	19.4	20.7	19.2	18.5	22.8	19.1	13.3	15.7	13.2	14.9	16.4	20.2	18.5	14.1	14.8
Calcium, Dissolved	MG/L																									
Cobalt, Total	MG/L	0.018	0.0195							0.018																
Copper, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Dissolved	MG/L																									
Chromium, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0044	ND	ND	ND	ND	ND	ND
Chromium, Dissolved	MG/L																									
Iron, Total	MG/L	9	7.37	4.13	2.98	10.8	10.6	102	7.5	8.7	5.1	6.8	6.7	9.5	22.2	22.6	10.2	4.1	6.5	5.5	ND	5.5	7.7	9	9.87	9.22
Iron, Dissolved	MG/L																									
Lead, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0034	0.0029	0.00074	0.00031	0.00033	ND	0.00051	ND	ND	0.00029	0.003	0.002
Lead, Dissolved	MG/L																									
Magnesium, Total	MG/L	20.1	19.5	18.3	17.8	27.2	23.7	22.8	24.7	28.5	15.9	22.4	24.0	25.0	21.4	21.3	21.4	17.4	20.4	16	20.1	19.9	25.2	25.5	19.9	20.4
Magnesium, Dissolved	MG/L																									
Manganese, Total	MG/L	12.2	13.3	12.9	12.2	14.5	12.7	13.2	11.9	11.9	7	8.6	8.0	7.4	6.8	8.2	6.7	4.6	6.1	5	5.9	5.9	6.6	4.8	4.15	4.96
Manganese, Dissolved	MG/L																									
Mercury, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.3E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury, Dissolved	MG/L																									
Nickel, Total	MG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0020	ND	ND	ND	ND	0.0043	ND	ND	ND	ND	ND	ND
Potassium, Total	MG/L	5.6	5.11	4.73	5.75	7.89	6.8	6.2	7	7	6.1	6.6	6.2	5.7	5.2	6.0	5.4	5.7	6.6	5.5	6.5	6.4	6.7	6.8	5.9	5.6
Potassium, Dissolved	MG/L																									
Sodium, Dissolved	MG/L																									
Sodium, Total	MG/L	16.9	13	12.4	15.4	32.8	22.2	20.9	28.8	34.1	26.3	34	29.1	28.4	22.5	26.4	16.9	13.9	18.6	15.6	17.6	16.9	21.9	23.6	16.8	16.3
Silver, Total	MG/L	ND	ND							ND																
Selenium, Total	MG/L	ND	ND							ND																
Selenium, Dissolved	MG/L																									
Thallium, Total	MG/L	ND	ND							ND																
Vanadium, Total	MG/L	ND	ND							ND																
Zinc, Total	MG/L	ND	ND	ND	ND	ND	ND	0.02	ND	ND	ND	ND	ND	ND	0.0045	0.012	ND	ND	ND	ND	ND	ND	ND	0.0036	ND	ND
Zinc, Dissolved	MG/L																									
VOCs																										
1,1,1,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane (DBCP)	UG/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane DBCP	UG/L	ND																								
1,2-Dibromoethane (EDB)	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	UG/L																									
1,3-Dichloropropene	UG/L																									
1,4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	UG/L																									
2-Hexanone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chloropropene	UG/L																									
Acetone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	UG/L																									
Acrylonitrile	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand	UG/L		ND	ND	ND	15.5	16.3	20.9	17.2	22.5	20.3	13.8	ND	20.3	ND	9.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	UG/L	ND	6.5							ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	UG/L																									
Diethyl ether	UG/L																									
Ethylbenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether	UG/L																									
Methyl Tert-Butyl ether	UG/L	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55	0.92	0.32	0.28	0.58	0.49	0.39	1	0.93	0.91	ND	ND
Methylene chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dioxane	UG/L																									
Styrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	UG/L																									
Toluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	UG/L									ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	UG/L	ND	ND	ND	ND	ND	ND	ND	3.5	ND	1.1	ND	ND	2.4	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND