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August 2, 2022

City of Detroit, Demolition Department  
Mr. Al Dyer  
1301 Third Street, Suite 606  
Detroit, Michigan 48226

**RE: Limited Phase II Environmental Site Assessment Report  
Lenox Center Property – QQ-0070  
100 Lenox Street  
Detroit, Michigan 48226  
Atlas Project No.: 188BS22164**

Dear Mr. Dyer:

On behalf of the City of Detroit, Demolition Department (the “client”), Atlas Technical Consultants LLC (Atlas) conducted a limited Phase II Environmental Site Assessment (Phase II ESA) for the above-referenced property (the “site”) to ensure care is taken during demolition of the Lenox Center building and any related subgrade construction activities. This report has been prepared for the exclusive use of the client and it is a report upon which you may rely. The scope of work was based on the following potential environmental concerns identified in Atlas’s Phase I Environmental Site Assessment (Phase I ESA) with a report dated September 20, 2021:

- Significant filling occurred in the southern portion of the site along the Detroit River between 1937 and 1981 (and possible deposition of fill material in other areas of the site).
- For the western adjoining off-site property, a Baseline Environmental Assessment (BEA) was submitted to the State of Michigan in 2006 under the names Lenox Waterfront Estates (Lenox and Avondale Streets) and Morgan Development LLC (South side of Lenox Street between Avondale and the Detroit River) which are associated with the uncompleted residential development. Based on the above BEA, a previous 2004 environmental study indicated concentrations of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs) and/or various metals in soil and/or groundwater above the residential cleanup criteria contained in State of Michigan, Natural Resources and Environmental Protection Act, Act 451 of 1994, as amended (P.A. 451), Part 201 and this property was defined as an environmental “facility”.

Accordingly, Atlas was retained by the client to conduct a limited Phase II ESA in an attempt to determine if the site was adversely affected by the aforementioned potential environmental concerns.

## **PRE-FIELDWORK ACTIVITIES**

Prior to conducting field activities, Atlas prepared a site-specific health and safety plan (HASP) in order to address potential safety issues associated with the proposed scope of work. The HASP evaluated potential hazards associated with the field activities and personnel protective measures were selected based on the perceived potential hazards. In addition, before conducting the field activities, Atlas contacted the State of Michigan utility locator service (MISS DIG) a minimum of 72 hours prior to conducting the sampling activities at the site. Additionally, Atlas personnel oversaw limited use of Ground Penetrating Radar equipment to clear proposed boring locations of unidentified potential buried objects (e.g., utility lines, etc.) which was performed by Terra Probe.

## **SUBSURFACE INVESTIGATION**

### **Geoprobe® Soil Borings with Soil and Groundwater Sample Collection and Laboratory Analysis**

On April 12, 2022, Atlas oversaw the advancement of eight (8) hand auger/Geoprobe® soil borings identified as GP-1 through GP-8 by Terra Probe to depths ranging from approximately 12 feet below surface grade (bsg) to a maximum depth of 18.5 feet bsg at GP-1. The borings were advanced using a 4-inch diameter, stainless steel hand auger to approximately 5 feet bsg with continued boring advancement to the terminus of the borings using a track-mounted Geoprobe® unit. Please refer to Appendix A for a map depicting the locations of borings GP-1 through GP-8.

During boring advancement, soil samples were continuously collected from GP-1 through GP-8 in duplicate (i.e., one sample for potential laboratory analysis and one sample for field screening purposes) with the first set of samples placed in pre-cleaned glass containers with Teflon lined lids and the samples collected for VOCs analysis were methanol preserved, and the second set of samples placed in sealed zip-lock bags for field screening purposes. While awaiting potential laboratory analysis, the containerized samples were placed on “wet” ice in a cooler immediately after collection. Disposable nitrile gloves were worn by Atlas’ field staff and changed between samples to reduce the likelihood of cross-contamination. Following sample collection, the borings were abandoned by placing the native soils mixed with bentonite chips back into the boreholes from which it came.

Soil samples were field screened using a photo-ionization detector (PID), visual and olfactory field screening techniques. The PID measures total organic volatiles (TOVs) in parts per million (ppm) and the PID was calibrated in the field prior to use. During the advancement of GP-1 through GP-8, groundwater in sufficient quantities for laboratory analytical purposes was encountered at all the boring locations except for GP-1. The borings were converted into temporary groundwater monitoring wells which were constructed of 1-inch diameter polyvinyl chloride (PVC) casing and 0.010-inch slotted screen of 5 feet in length and grab samples were collected using a peristaltic pump and new tubing. Atlas notes, “low flow” groundwater sampling techniques as defined by

of the State of Michigan, Department of Environment, Great Lakes and Energy (EGLE) were not utilized to collect the groundwater samples since EGLE generally requires low flow sampling for regulatory purposes such as delineation, site closure verification, etc. This project was an attempt to determine if the site was impacted for due diligence purposes only. For details, please refer to the boring logs in Appendix B.

Based on the field screening results, one (1) soil sample from each GP-1 (2'-4'), GP-2 (1'-3'), GP-3 (1'-3'), GP-4 (7'-8'), GP-5 (1'-2'), GP-6 (1'-2'), GP-7 (1'-2'), and GP-8 (2'-4') were submitted for laboratory analysis for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc (the 10 Michigan Metals). The groundwater samples from GP-2, GP-3, GP-4, GP-5, GP-6, GP-7, and GP-8 were submitted for laboratory analysis for the presence of VOCs, SVOCs, PCBs, and the 10 Michigan Metals. The soil samples collected for VOC analysis were methanol preserved in the field and the groundwater samples collected for VOC analysis were placed in laboratory containers preserved with hydrochloric acid (HCl). Also, quality assurance/quality control (QA/QC) samples to include 1 duplicate soil and 1 duplicate groundwater sample were laboratory analyzed for VOCs, SVOCs, 10 Michigan Metal and PCBs; and, a trip blank water sample was laboratory analyzed for VOCs. The soil and groundwater samples were submitted for laboratory analysis to Quantum Laboratories, Inc. located in Wixom, Michigan (Quantum) under chain-of-custody documentation. Quantum analyzed the samples utilizing United States Environmental Protection Agency (USEPA) Solid Waste 846 (SW846) Laboratory Methods 8260/5035 (VOCs), 8270 (SVOCs), 8082 (PCBs); and, 7010, 7470 and 7471 (metals). For details, please refer to the laboratory analytical summary tables in Appendix C and to the laboratory reports in Appendix D.

## **LITHOLOGY, FIELD SCREENING AND LABORATORY ANALYTICAL RESULTS**

### **Lithology**

During the advancement of GP-1 through GP-8, the surface cover consisted of grass/topsoil. Below the surface cover, the soils generally consisted of intermixed horizons of brown to dark gray, damp to saturated, clay with varying amounts of sand and silt; and, horizons of fine to coarse grain sand with varying amounts of silt that continued to the bottom of the borings (maximum boring depth was 18.5 feet bsg at GP-1). The soil horizons contained debris (e.g., brick) at GP-1, GP-4, GP-5, GP-6, GP-7 and GP-8 at depths ranging from near grade up to 12' bsg which indicates fill materials were placed in several areas of the site. With the exception of GP-1, all the borings contained groundwater at depths ranging from approximately 4 feet bsg to 12 feet bsg and in sufficient quantities for laboratory analytical purposes. Since the main objective of this limited Phase II ESA is to facilitate future demolition-related activities, performance of hydrogeological investigative activities was deemed unnecessary. For details, please refer to the boring logs in Appendix B.

### **Field Screening Results**

The soil sample field screening results from GP-1 through GP-8 did not indicate the presence of elevated TOVs (no TOVs were detected above 2 ppm). However, debris (e.g., brick, etc.) was generally observed in the soils at depths up to approximately 12' bsg.

### **Soil Sample Laboratory Analytical Results**

Based on the soil sample laboratory analytical results from GP-1 through GP-8, the presence of arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc was detected at concentrations ranging from 112 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) of mercury at GP-4 (7'-8') to 18,000,000  $\mu\text{g}/\text{kg}$  of copper at GP-1 (2'-4').

Additionally, the soil sample laboratory analytical results from GP-1 and GP-3 through GP-8 all indicated the presence of one or more of the following SVOCs: acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, carbazole, chrysene, di-n-butylphthalate, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and/or pyrene. The SVOCs were detected at concentrations ranging from of 332  $\mu\text{g}/\text{kg}$  of benzo(a)pyrene at GP-5 (1'-2') to 8,720  $\mu\text{g}/\text{kg}$  of Fluoranthene at GP-3 (1'-3')(duplicate). In addition, the presence of aroclor 1260 (a PCB) was detected in soil at GP-6 (1'-2') at 119  $\mu\text{g}/\text{kg}$ . The remaining soil samples did not indicate the presence of other metals, VOCs, SVOCs, or PCBs above the laboratory detection limits.

Since metals can be naturally occurring in soil, the metals results were compared to the State of Michigan Default Background Levels (DBLs) contained in Table 2. Soil: Residential Part 201 Generic Cleanup Criteria and Screening Levels/Part 213 Risk-Based Screening Levels, dated June 25, 2018 (Table 2) as issued under State of Michigan, Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (P.A. 451), Part 201. Based on the above comparison, the following metals in soil results were above their DBLs: barium, cadmium, chromium, copper, lead, mercury, and zinc. The DBLs for barium, cadmium, chromium, copper, lead, mercury, and zinc are 75,000  $\mu\text{g}/\text{kg}$ , 1,200  $\mu\text{g}/\text{kg}$ , 18,000  $\mu\text{g}/\text{kg}$ , 32,000  $\mu\text{g}/\text{kg}$ , 21,000  $\mu\text{g}/\text{kg}$ , 130  $\mu\text{g}/\text{kg}$ , and 47,000  $\mu\text{g}/\text{kg}$  respectively. None of the remaining detected metals were above the DBLs contained in Table 2 of P.A. 451, Part 201.

Based on the subsurface conditions on-site (e.g., sandy soils with potential groundwater aquifer conditions), Atlas also compared the detected metals, SVOCs and PCBs in the soil to the Residential Drinking Water Protection Criteria (DWPC), Direct Contact Criteria (DCC) and/or to the Soil Volatilization to Indoor Air Inhalation Criteria (SVIAC) contained in Table 2 of P.A. 451, Part 201. Due to the above comparisons, the soil sample results from GP-3 (1'-3'), GP-3 (1'-3') (duplicate), and GP-8 (2'-4') indicated the presence of lead at 848,000 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ), 1,730,000  $\mu\text{g}/\text{kg}$  and 3,900,000  $\mu\text{g}/\text{kg}$  which all exceed the Residential DWPC of 700,000  $\mu\text{g}/\text{kg}$  and the Residential DCC of 400,000  $\mu\text{g}/\text{kg}$  in Table 2 of P.A. 451, Part 201. In addition, the

soil sample results from GP-8 (2'-4') also indicated the presence of barium, cadmium, copper, mercury and zinc at concentrations of 3,720,000 µg/kg, 168,000 µg/kg, 7,660,000 µg/kg, 3,730 µg/kg and 3,190,000 µg/kg, respectively, which all exceeded the Residential DWPC in Table 2 of P.A. 451, Part 201. The Residential DWPC for barium, cadmium, copper, mercury and zinc are 1,300,000 µg/kg, 6,000 µg/kg, 580,000 µg/kg, 1,700 µg/kg and 2,400,000 µg/kg, respectively. Lastly, the soil sample from GP-3 (1'-3') indicated the presence of benzo(a)pyrene at 3,250 µg/kg which is above the Residential DCC of 2,000 µg/kg in Table 2 of P.A. 451, Part 201. Atlas notes the duplicate soil sample from GP-3 (1'-3') indicated a greater concentration of benzo(a)pyrene at 3,850 µg/kg. The remaining detected metals, SVOCs and PCBS in soil did not exceed the residential DWPC, DCC or the SVIAC in Table 2 of P.A. 451, Part 201. It is noted the soil sample results from GP-3 (1'-3') and the duplicate soil sample GP-3 (1'-3') results appear to be similar (i.e., both soil samples indicated the presence of metals and PNAs at similar concentrations). For details, please refer to Appendix C for summary tables of detected laboratory parameters in soil and to Appendix D for a copy of the laboratory analytical report.

#### **Groundwater Sample Laboratory Analytical Results**

Based on the grab groundwater sample laboratory analytical results from GP-2 through GP-8, the presence of arsenic, barium, cadmium and/or zinc was detected in groundwater at concentrations ranging from 5 micrograms per liter (µg/L) of arsenic at GP-6 to 1,190 µg/L of barium at GP-7. In addition, the groundwater sample from GP-4 indicated the presence of VOCs to include benzene at 167 µg/L, ethylbenzene at 1 µg/L and naphthalene at 8 µg/L; and, the groundwater sample from GP-4 also indicated the presence of SVOCs to include fluoranthene at 2 µg/L and phenanthrene 5 µg/L. The remaining groundwater samples did not indicate the presence of other metals, VOCs or SVOCs above the laboratory detection limits.

Based on the subsurface conditions on-site (e.g., sandy soils with potential groundwater aquifer conditions), Atlas compared the detected metals, VOCs and SVOCs in groundwater to the Residential Drinking Water Cleanup Criteria (DWC) and/or to the Groundwater Volatilization to Indoor Air Inhalation Cleanup Criteria (GVIAIC) contained in Table 1. Groundwater: Residential and Non-Residential, Part 201 Generic Cleanup Criteria and Screening Levels/Part 213 Risk-Based Screening Levels, dated December 21, 2020 (Table 1) of P.A. 451, Part 201. Based on the above comparison, the benzene detected at GP-4 at a concentrations of 167 µg/L was above the Residential DWC of 5 µg/L in Table 1 of P.A. 451, Part 201. Due to the above comparison, none of the remaining detected metals, VOCs, or SVOCs in groundwater were above the Residential DWC or the GVIAIC in Table 1 of P.A. 451, Part 201. It is noted the groundwater sample results from GP-3 and the duplicate groundwater sample GP-3 results appear to be similar (i.e., both groundwater samples indicated the presence of metals at similar concentrations). For details, please refer to Appendix C for summary tables of detected laboratory parameters in groundwater and to Appendix D for a copy of the laboratory analytical report.

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## CONCLUSIONS AND RECOMMENDATIONS

During the advancement of GP-1 through GP-8, the soils generally consisted of intermixed horizons of brown to dark gray, damp to saturated, clay with varying amounts of sand and silt; and, horizons of fine to coarse grain sand with varying amounts of silt that continued to the bottom of the borings. Based on the presence of sandy soils with groundwater, a potential groundwater aquifer as defined by EGLE may be present.

The soil sample field screening results from GP-1 through GP-8 did not indicate the presence of elevated TOVs above 2 ppm. However, debris (e.g., brick, etc.) was generally observed in the soils at depths up to approximately 12' bsg.

Based on the soil sample laboratory analytical results from GP-1 through GP-8, the presence of metals (e.g., arsenic, etc.) was detected at concentrations ranging from 112 µg/kg of mercury at GP-4 (7'-8') to 18,000,000 µg/kg of copper at GP-1 (2'-4').

Additionally, the soil sample laboratory analytical results from GP-1 and GP-3 through GP-8 all indicated the presence of SVOCs (e.g., acenaphthene, etc.). The SVOCs were detected at concentrations ranging from of 332 µg/kg of benzo(a)pyrene at GP-5 (1'-2') to 8,720 µg/kg of Fluoranthene at GP-3 (1'-3')(duplicate). Also, the presence of aroclor 1260 (a PCB) was detected in soil at GP-6 (1'-2') at 119 µg/kg.

Atlas compared the detected metals, SVOCs and PCBs in the soil to the Residential DWPC, DCC and/or to the SVIAC contained in Table 2 of P.A. 451, Part 201. The soil sample results from GP-3 (1'-3'), GP-3 (1'-3') (duplicate), and GP-8 (2'-4') indicated the presence of lead at 848,000 µg/kg, 1,730,000 µg/kg and 3,900,000 µg/kg which all exceed the Residential DWPC of 700,000 µg/kg and the Residential DCC of 400,000 µg/kg in Table 2 of P.A. 451, Part 201. In addition, the soil sample results from GP-8 (2'-4') also indicated the presence of barium, cadmium, copper, mercury and zinc at concentrations of 3,720,000 µg/kg, 168,000 µg/kg, 7,660,000 µg/kg, 3,730 µg/kg and 3,190,000 µg/kg, respectively, which all exceeded the Residential DWPC in Table 2 of P.A. 451, Part 201. The Residential DWPC for barium, cadmium, copper, mercury and zinc are 1,300,000 µg/kg, 6,000 µg/kg, 580,000 µg/kg, 1,700 µg/kg and 2,400,000 µg/kg, respectively. Lastly, the soil sample from GP-3 (1'-3') indicated the presence of benzo(a)pyrene at 3,250 µg/kg, which is above the Residential DCC of 2,000 µg/kg in Table 2 of P.A. 451, Part 201.

Based on the groundwater sample laboratory analytical results from GP-2 through GP-8, the presence of metals (e.g., arsenic, etc.) were detected in groundwater at concentrations ranging from 5 µg/L of arsenic at GP-6 to 1,190 µg/L of barium at GP-7. In addition, the groundwater sample from GP-4 indicated the presence of VOCs to include benzene at 167 µg/L, ethylbenzene at 1 µg/L and naphthalene at 8 µg/L; and, the groundwater sample from GP-4 also indicated the presence of SVOCs to include fluoranthene at 2 µg/L and phenanthrene 5 µg/L.



Atlas compared the detected metals, VOCs and SVOCs in groundwater to the Residential DWC and/or to the GVIAIC contained in Table 1 of P.A. 451, Part 201. Based on the above comparison, the benzene detected at GP-4 at a concentrations of 167 µg/L was above the Residential DWC of 5 µg/L in Table 1 of P.A. 451, Part 201.

According to the soil and groundwater sample analytical results, the detected presence of the following laboratory parameters in soil and groundwater above the referenced residential cleanup criteria appear to define the site as an environmental “facility” as defined by P.A. 451, Part 201:

- lead and benzo(a)pyrene in soil above the DCC at GP-3 (1’-3’);
- lead in soil above the DCC at GP-8 (2’-4’);
- lead above the DWPC at GP-3 (1’-3’);
- barium, cadmium, copper, lead, mercury and zinc in soil above the Residential DWPC at GP-8 (2’-4’); and,
- benzene in groundwater above the Residential DWC at GP-4.

Atlas notes the detected laboratory parameters in soil and groundwater have not been horizontally or vertically delineated; and, because the placement of fill materials with debris seems to be the source of the contamination, delineation of the contaminated soil and groundwater on-site may be difficult if the fill came from multiple sources and was placed in varying locations on-site.

Due to the environmental “facility” status of the site, it may be warranted to delineate the detected PNAs and metals detected at GP-3 and GP-8 above the DCC followed by preparation of a Due Care Evaluation (DCE) (aka Due Care Plan) in an attempt to prevent unacceptable human exposure of site workers and/or visitors to the detected laboratory parameters on-site in the future.

## **LIMITATIONS AND QUALIFICATIONS**

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. This company is not responsible for the independent conclusions, opinions, or recommendations made by others based on the field exploration data presented in this report. It is noted that all environmental assessments are inherently limited in the sense that conclusions are drawn and recommendations were developed from information obtained from limited research and site evaluation.

The results and conclusions presented herein are based solely on the aforementioned field screening techniques and field observations. Additionally, the passage of time may result in a change in the environmental characteristics at this site and surrounding properties.

The work performed in conjunction with this assessment and the data developed are intended as a description of available information at the dates and locations given. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.


With respect to Atlas' interpretation of government (federal, state or local) generated documents (e.g., EGLE), Atlas notes opinions of other parties may differ from our opinion and Atlas recommends consultation with appropriate counsel for legal guidance.

If there are any questions pertaining to this report, please do not hesitate to contact Joshua Schuyler at (248-982-5378 / [joshua.schuyler@oneatlas.com](mailto:joshua.schuyler@oneatlas.com)) or the undersigned.

Respectfully Submitted,  
**Atlas Technical Consultants LLC**

A handwritten signature in black ink that reads "Andrew Temerowski".

Andrew Temerowski  
Project Scientist  
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A handwritten signature in black ink that reads "Kevin D. LaForge".

Kevin D. LaForge  
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## **APPENDICES**

Appendix A	Maps
Appendix B	Boring Logs
Appendix C	Laboratory Analytical Summary Tables
Appendix D	Laboratory Reports

## **APPENDIX A**

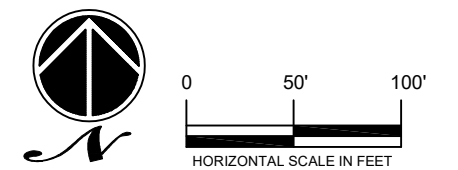




--- SUBJECT PROPERTY BOUNDARY

▭ SUBJECT PROPERTY BUILDING

● SOIL BORING LOCATION



**ATLAS**

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 GRAND RAPIDS, MI 49546  
 PH: 616-698-3131  
 FAX: 616-698-1922  
 WEBSITE: WWW.ONEATLAS.COM

DATE:  
04/15/2022

PROJECT NO.:  
188BS22164

DRAWN BY:  
DTB

SCALE:  
AS SHOWN

REVIEWED BY:  
KL

**FIGURE 1**

**SAMPLE LOCATION MAP**

Lenox Center Property  
 100 Lenox Street  
 Detroit, Michigan



## **APPENDIX B**



# Soil Boring Log

46555 Humboldt Drive, Ste. 100  
 Novi, MI 48377  
 Phone: (248) 669-5140  
 Fax: (248) 669-5147

**Project Number:** 188BS22164  
**Project Name:** Lenox Center Property  
**Site Location:** 100 Lenox Street  
**City, State:** Detroit, Michigan  
**Boring Diameter:** 4" HA/2.25" Macrocore  
**Drilling Method:** Hand Auger / Macrocore

**Boring Number:** GP-1 **Page:** 1  
**Start Date:** 03/12/22 **End Date:** 04/12/22  
**Casing:** PVC - Temporary  
**Casing Diameter:** 1" **Length:** 4'  
**Screen Slot Size:** 0.010"  
**Screen Diameter:** 1" **Length:** 5'

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction		
0						TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots				
1	HA			12"			0.0			
2	HA			12"		CLAY, gray to discolored, sandy, with brick, moist.			0.1	
3	HA	2-4'	GP-1	12"						
4	HA			12"						
5	HA			12"			Clay, brown and gray, sandy, with brick, moist.		0.0	
6	GP			12"						
7	GP			12"			SAND, black, coarse to medium grained, moist.		0.0	
8	GP			12"						
9	GP			12"			SAND, dark gray, silty, with brick, moist.		0.1	
10	GP			12"						
11	GP			12"			Sand, gray, silty, moist.		0.0	
12	GP			12"						
13	GP			12"			CLAY, gray, sandy, moist. Limited Recovery.		0.0	
14	GP			12"						← Native soils
15	GP			12"						0.0
16	GP			12"						
17	GP			12"			CLAY, gray sandy, stiff. Limited Recovery.		0.0	
18	GP			6"				0.0		
19						End of Boring				
20										
21										
22										
23										
24										
25										

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**  
**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_  
**Backfill:** Native Backfill and Bentonite  
**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE  
**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



# Soil Boring Log

46555 Humboldt Drive, Ste. 100 Novi, MI 48377 Phone: (248) 669-5140 Fax: (248) 669-5147	<b>Project Number:</b> 188BS22164 <b>Project Name:</b> Lenox Center Property <b>Site Location:</b> 100 Lenox Street <b>City, State:</b> Detroit, Michigan <b>Boring Diameter:</b> 4" HA/2.25" Macrocore <b>Drilling Method:</b> Hand Auger / Macrocore	<b>Boring Number:</b> GP-2 <b>Start Date:</b> 04/12/22 <b>Casing:</b> PVC - Temporary <b>Casing Diameter:</b> 1" <b>Length:</b> 4' <b>Screen Slot Size:</b> 0.010" <b>Screen Diameter:</b> 1" <b>Length:</b> 5'	<b>Page:</b> 1 <b>End Date:</b> 04/12/22
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FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction	
0	HA			12"		TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots			
1	HA	1-3'	GP-2	12"		SAND, dark brown, coarse to medium grained, with brick, moist.	0.0		
2	HA			12"			0.0		
3	HA			12"					0.0
4	HA			12"		SAND, brown, coarse to medium grained, moist.	0.0		
5	HA			12"			0.0		
6	GP			12"		SAND, bark brown, coarse to medium grained with gravel, wet. Temporary Monitoring well set at 2-7' BSG, sample collected.	0.0		
7	GP			12"			0.0		
8	GP			12"		CLAY, gray, sandy.	0.0		← Native soils
9	GP			12"		CLAY, brown to dark brown, sandy, moist. Limited recovery. Temporary Monitoring well set at 5-10' BSG, sample collected.	0.0		
10	GP			12"			0.0		
11	GP			12"			0.0		
12					End of Boring				
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

(HA) = HAND AUGER    (DS) = DISTURBED SAMPLE (AK) = AIR KNIFE      (GP) = Geoprobe (SS) = SPLIT SPOON    bpf = blows per foot (qP) = Penetrometer Unconfined Compressive Strength <b>Logged by:</b> Andrew Temerowski <b>Drawn by:</b> Andrew Temerowski <b>Checked by:</b> Kevin LaForge	<b>Borehole Observations After Drilling</b> <b>Immediately after:</b> _____ <b>Hrs. after:</b> _____ <b>Backfill:</b> Native Backfill and Bentonite <b>Drilling Co.:</b> Terra Probe <b>Drill Rig Type:</b> Geoprobe	(Rec.) = RECOVERY      (EOB) = END OF BORING (bgs) = Below Ground Surface (NR) = NO RECOVERY (NA) = NOT APPLICABLE <b>Driller:</b> Scott Seals <b>Assistant:</b> _____
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# Soil Boring Log

46555 Humboldt Drive, Ste. 100  
 Novi, MI 48377  
 Phone: (248) 669-5140  
 Fax: (248) 669-5147

**Project Number:** 188BS22164  
**Project Name:** Lenox Center Property  
**Site Location:** 100 Lenox Street  
**City, State:** Detroit, Michigan  
**Boring Diameter:** 4" HA/2.25" Macrocore  
**Drilling Method:** Hand Auger / Macrocore

**Boring Number:** GP-3 **Page:** 1  
**Start Date:** 04/12/22 **End Date:** 04/12/22  
**Casing:** PVC - Temporary  
**Casing Diameter:** 1" **Length:** 4'  
**Screen Slot Size:** 0.010"  
**Screen Diameter:** 1" **Length:** 5"

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction	
0						TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots			
1	HA			12"			0.0	← Native soils	
2	HA	1-3'	GP-3	12"		CLAY, brown and gray, sandy with gravel, moist.			0.0
3	HA			12"					0.0
4	HA			12"					0.0
5	HA			12"					0.0
6	GP			12"		CLAY, gray, sandy, stiff to clay gray sandy, moist, soft.			0.0
7	GP			12"					0.0
8	GP			12"		CLAY, dark gray, sandy with gravel, moist.			0.0
9	GP			12"					0.0
10	GP			12"		SAND, dark gray, course to medium grained, silty, moist			0.0
11	GP			12"					0.0
12	GP			12"					0.0
13	GP			12"		SAND, gray, course to medium grained, silty, moist. Temporary Monitoring well set at 7-12' BSG, sample collected.			0.0
14	GP			12"					0.0
15	GP			12"					0.0
16	GP			12"					0.0
17	GP			12"			0.0		

End of Boring

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**

**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_

**Backfill:** Native Backfill and Bentonite

**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE

**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



# Soil Boring Log

46555 Humboldt Drive, Ste. 100  
 Novi, MI 48377  
 Phone: (248) 669-5140  
 Fax: (248) 669-5147

**Project Number:** 188BS22164  
**Project Name:** Lenox Center Property  
**Site Location:** 100 Lenox Street  
**City, State:** Detroit, Michigan  
**Boring Diameter:** 4" HA/2.25" Macrocore  
**Drilling Method:** Hand Auger / Macrocore

**Boring Number:** GP-4 **Page:** 1  
**Start Date:** 04/12/22 **End Date:** 04/12/22  
**Casing:** PVC - Temporary  
**Casing Diameter:** 1" **Length:** 4'  
**Screen Slot Size:** 0.010"  
**Screen Diameter:** 1" **Length:** 5"

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction
0						TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots		
1	HA			12"		CLAY, brown and gray, sandy, moist.	0.1	
2	HA		12"				0.1	
3	HA		12"					
4	HA		12"					
5	HA		12"			SAND, black with gravel, wet.	1.5	
6	GP		12"					
7	GP		12"			CLAY, gray, sandy with brick, moist.	2.5	
8	GP	7-8'	GP-4	12"				
9	GP		12"				0.0	
10	GP		12"			STONE AND BRICK, wet. Temporary Monitoring well set at 4.5-9.5' BSG, sample collected.	0.0	
11	GP		12"					
12					End of Boring			
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**

**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_

**Backfill:** Native Backfill and Bentonite

**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE

**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



# Soil Boring Log

46555 Humboldt Drive, Ste. 100  
 Novi, MI 48377  
 Phone: (248) 669-5140  
 Fax: (248) 669-5147

**Project Number:** 188BS22164  
**Project Name:** Lenox Center Property  
**Site Location:** 100 Lenox Street  
**City, State:** Detroit, Michigan  
**Boring Diameter:** 4" HA/2.25" Macrocore  
**Drilling Method:** Hand Auger / Macrocore

**Boring Number:** GP-5 **Page:** 1  
**Start Date:** 04/12/22 **End Date:** 04/12/22  
**Casing:** PVC - Temporary  
**Casing Diameter:** 1" **Length:** 4'  
**Screen Slot Size:** 0.010"  
**Screen Diameter:** 1" **Length:** 5"

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction
0						TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots		Native soils ←
1	HA			12"		SAND, dark brown, coarse to medium grained, moist.	0.1	
2	HA	1-2'	GP-5	12"		CLAY, brown and gray, sandy, moist.		
3	HA			12"			0.1	
4	HA			12"	▼	SAND, black, coarse to medium grained, moist.		
5	HA			12"			1.5	
6	GP			12"		CLAY, light gray to dark, sandy, with brick, moist.		
7	GP			12"			2.5	
8	GP			12"				
9	GP			12"		CLAY, gray, sandy soft. Temporary Monitoring well set at 4-9' BSG, sample collected.	0.0	
10	GP			12"				
11	GP			12"			0.0	
12						End of Boring		
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**

**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_

**Backfill:** Native Backfill and Bentonite

**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE

**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



# Soil Boring Log

46555 Humboldt Drive, Ste. 100  
 Novi, MI 48377  
 Phone: (248) 669-5140  
 Fax: (248) 669-5147

**Project Number:** 188BS22164  
**Project Name:** Lenox Center Property  
**Site Location:** 100 Lenox Street  
**City, State:** Detroit, Michigan  
**Boring Diameter:** 4" HA/2.25" Macrocore  
**Drilling Method:** Hand Auger / Macrocore

**Boring Number:** GP-6 **Page:** 1  
**Start Date:** 04/12/22 **End Date:** 04/12/22  
**Casing:** PVC - Temporary  
**Casing Diameter:** 1" **Length:** 4'  
**Screen Slot Size:** 0.010"  
**Screen Diameter:** 1" **Length:** 5"

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction
0						TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots		← Native soils
1	HA			12"	[Graphic: Vertical hatched bar]	CLAY, brown and gray, sandy with stone, moist. Limited Recovery.	0.1	
2	HA	1-2'	GP-6	12"				
3	HA			12"				
4	HA			12"		SAND, dark brown, coarse to medium grained, moist to CLAY, gray, sandy, moist.	0.1	
5	HA			12"				
6	GP			12"				
7	GP			12"		SAND, gray, silty, with brick, moist.	2.7	
8	GP			12"				
9	GP			12"				
10	GP			12"		CLAY, gray, sandy, silty, soft. Temporary Monitoring well set at 7-12' BSG, sample collected.	0.3	
11	GP			12"				
12	GP			12"				
13	GP			12"		SAND, gray to dark gray, silty, wet.	0.2	
14	GP			12"				
15	GP			12"				
16						End of Boring	0.0	
17								
18								
19								
20								
21								
22								
23								
24								
25								

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**  
**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_  
**Backfill:** Native Backfill and Bentonite  
**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE  
**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



# Soil Boring Log

46555 Humboldt Drive, Ste. 100  
 Novi, MI 48377  
 Phone: (248) 669-5140  
 Fax: (248) 669-5147

**Project Number:** 188BS22164  
**Project Name:** Lenox Center Property  
**Site Location:** 100 Lenox Street  
**City, State:** Detroit, Michigan  
**Boring Diameter:** 4" HA/2.25" Macrocore  
**Drilling Method:** Hand Auger / Macrocore

**Boring Number:** GP-7 **Page:** 1  
**Start Date:** 04/12/22 **End Date:** 04/12/22  
**Casing:** PVC - Temporary  
**Casing Diameter:** 1" **Length:** 4'  
**Screen Slot Size:** 0.010"  
**Screen Diameter:** 1" **Length:** 5"

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction
0	HA			12"		TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots		
1	HA	1-2'	GP-7	12"		CLAY, brown and gray, sandy with brick, moist.	0.2	
2	HA			12"				
3	HA			12"			0.2	
4	HA			12"				
5	HA			12"		SAND, brown with gravel, moist.	0.2	
6	GP			12"				
7	GP			12"		SAND, brown to gray, wet.	0.0	
8	GP			12"				
9	GP			12"			0.0	
10	GP			12"	SAND, gray silty, wet. Temporary Monitoring well set at 5-10' BSG, sample collected.			
11	GP			12"		0.0		
12								
13						End of Boring		
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**  
**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_  
**Backfill:** Native Backfill and Bentonite  
**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE  
**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



# Soil Boring Log

46555 Humboldt Drive, Ste. 100 Novi, MI 48377 Phone: (248) 669-5140 Fax: (248) 669-5147	<b>Project Number:</b> 188BS22164 <b>Project Name:</b> Lenox Center Property <b>Site Location:</b> 100 Lenox Street <b>City, State:</b> Detroit, Michigan <b>Boring Diameter:</b> 4" HA/2.25" Macrocore <b>Drilling Method:</b> Hand Auger / Macrocore	<b>Boring Number:</b> GP-8 <b>Start Date:</b> 04/12/22 <b>Casing:</b> PVC - Temporary <b>Casing Diameter:</b> 1" <b>Length:</b> 4' <b>Screen Slot Size:</b> 0.010" <b>Screen Diameter:</b> 1" <b>Length:</b> 5"	<b>Page:</b> 1 <b>End Date:</b> 04/12/22
--	---	--	---

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE NUMBER	Rec.	Graphic	LITHOLOGY DESCRIPTION	PID PPM	Well Construction	
0						TOP SOIL/SAND mix, brown-dark brown in color, damp, organics/roots			
1	HA			12"		CLAY, brown and gray, sandy with brick, moist.	0.1		
2	HA		12"						
3	HA	2-4'	GP-8	12"					
4	HA			12"					
5	HA			12"			▼		0.0
6	GP			12"		CLAY, dark brown to brown, sandy, with brick and metal clip, moist. Limited Recovery.	0.0		
7	GP			12"			0.0		
8	GP			12"					
9	GP			12"			0.0		← Native soils
10	GP			12"					
11	GP			12"		SAND, dark gray to gray silty, wet. Temporary Monitoring well set at 5-10' BSG, sample collected.	0.0		
12	GP			12"					
13								End of Boring	
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE  
 (AK) = AIR KNIFE (GP) = Geoprobe  
 (SS) = SPLIT SPOON bpf = blows per foot  
 (qP) = Penetrometer Unconfined Compressive Strength  
**Logged by:** Andrew Temerowski  
**Drawn by:** Andrew Temerowski  
**Checked by:** Kevin LaForge

**Borehole Observations After Drilling**  
**Immediately after:** \_\_\_\_\_  
**Hrs. after:** \_\_\_\_\_  
**Backfill:** Native Backfill and Bentonite  
**Drilling Co.:** Terra Probe  
**Drill Rig Type:** Geoprobe

(Rec.) = RECOVERY (EOB) = END OF BORING  
 (bgs) = Below Ground Surface  
 (NR) = NO RECOVERY  
 (NA) = NOT APPLICABLE  
**Driller:** Scott Seals  
**Assistant:** \_\_\_\_\_



## **APPENDIX C**

**Table 1 - Summary of Soil Laboratory Analytical Results (Detected Metals)  
Lenox Center Property  
100 Lenox Street  
Detroit, Michigan**

Analytes	Statewide	Residential	Residential	Sample Locations								
	Default	Drinking Water	Direct Contact	GP-1	GP-2	GP-3	Duplicate (GP-3)	GP-4	GP-5	GP-6	GP-7	GP-8
	Background Levels	Protection Criteria	Criteria (DCC)	(2'-4')	(1'-3')	(1'-3')	(1'-3")	(7'-8')	(1'-2')	(1'-2')	(1'-2')	(2'-4')
	(µg/kg)	(DWPC) (µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
<b>Metals</b>												
Arsenic	5,800	4,600	7,600	6,240	2,420	2,790	2,800	2,630	992	2,700	1,460	4,760
Barium	75,000	1,300,000	37,000,000	<b>344,000</b>	<b>246,000</b>	<b>506,000</b>	<b>704,000</b>	<b>448,000</b>	<b>178,000</b>	<b>229,000</b>	<b>296,000</b>	<b>3,720,000</b>
Cadmium	1,200	6,000	550,000	1,050	261	<b>1,330</b>	<b>1,370</b>	<b>1,800</b>	ND	745	536	<b>168,000</b>
Chromium	18,000	100,000,000	790,000,000	8,040	16,300	<b>20,000</b>	<b>36,000</b>	<b>27,200</b>	6,710	13,200	12,900	<b>168,000</b>
Copper	32,000	580,000	20,000,000	<b>18,000,000</b>	<b>126,000</b>	<b>110,000</b>	<b>209,000</b>	<b>36,800</b>	19,200	<b>45,200</b>	<b>32,800</b>	<b>7,660,000</b>
Lead	21,000	700,000	400,000	<b>228,000</b>	<b>181,000</b>	<b>848,000</b>	<b>1,730,000</b>	<b>199,000</b>	<b>21,700</b>	<b>145,000</b>	<b>208,000</b>	<b>3,900,000</b>
Mercury	130	1,700	160,000	<b>1,320</b>	<b>136</b>	<b>423</b>	<b>960</b>	112	ND	<b>168</b>	<b>401</b>	<b>3,730</b>
Selenium	410	4,000	2,600,000	ND	ND	214	ND	ND	ND	ND	ND	ND
Silver	1,000	4,500	2,500,000	464	124	164	238	ND	ND	ND	ND	826
Zinc	47,000	2,400,000	170,000,000	<b>418,000</b>	<b>86,800</b>	<b>591,000</b>	<b>792,000</b>	<b>265,000</b>	31,800	<b>120,000</b>	<b>133,000</b>	<b>3,190,000</b>

- Notes:
1. Samples were collected on April 12, 2022.
  2. NA denotes: "Not Analyzed". ND denotes the indicated laboratory parameter was "Not Detected" above the laboratory reported detection limit (RDL).
  3. The cleanup criteria are derived from Table 2, Soil Residential Generic Cleanup Criteria and Screening Levels, issued under part 201 of P.A. 451 dated June 25, 2018 (Table 2).
  4. Shaded values exceed one or more applicable cleanup criteria and bold font indicates a metal detected above the Default Background Level contained in Table 2.
  5. All samples were analyzed at Quantum Laboratories, Inc. located in Wixom, Michigan.
  6. NLV denotes: "Not Likely to Volatilize", ID denotes: "Insufficient Data" that is available to establish criteria.
  7. µg/kg denotes micrograms per kilogram.
  8. A "G" denotes value depends on the pH or water hardness, or both, of the receiving waters and an "X" denotes value is not protective for surface water used as a drinking water source. For details, please refer to P.A. 451, Part 201, R 299.49 footnotes for Table 2.

**Table 2 - Summary of Soil Laboratory Analytical Results (Detected SVOCs)**

**Lenox Center Property  
100 Lenox Street  
Detroit, Michigan**

Analyte	Residential Drinking Water Protection Criteria (DWPC) (µg/kg)	Residential Soil Volatilization to Indoor Air Inhalation Criteria (SVIAC) (µg/kg)	Residential Direct Contact Criteria (DCC) (µg/kg)	Sample Location							
				GP-1 (2'-4') (µg/kg)	GP-3 (1'-3') (µg/kg)	Duplicate (GP-3) (1'-3') (µg/kg)	GP-4 (7'-8') (µg/kg)	GP-5 (1'-2') (µg/kg)	GP-6 (1'-2') (µg/kg)	GP-7 (1'-2') (µg/kg)	GP-8 (2'-4') (µg/kg)
<b>SVOCs</b>											
Acenaphthene	300,000	190,000,000	41,000,000	ND	405	445	ND	ND	ND	ND	ND
Anthracene	41,000	1,000,000,000	230,000,000	ND	1,440	1,760	474	ND	ND	ND	ND
Benzo(a)anthracene	NLL	NLV	20,000	669	3,350	3,680	1,130	ND	357	ND	378
Benzo(b)fluoranthene	NLL	NLV	20,000	492	2,070	1,760	615	ND	ND	ND	ND
Benzo(k)fluoranthene	NLL	NLV	200,000	914	4,430	5,560	1,500	453	528	425	705
Benzo(g,h,i)perylene	NLL	NLV	2,000,000	516	2,290	2,860	855	ND	ND	ND	381
Benzo(a)pyrene	NLL	NLV	2,000	770	3,250	3,830	1,100	332	359	ND	414
Carbazole	9,400	NLV	530,000	ND	526	657	ND	ND	ND	ND	ND
Chrysene	NLL	ID	2,000,000	660	3,290	3,770	1,220	ND	359	ND	416
Di-n-butylphthalate	960,000	NLV	27,000,000	ND	ND	405	ND	ND	ND	ND	ND
Dibenzofuran	ID	2,000,000	ID	ND	ND	401	ND	ND	ND	ND	ND
Fluoranthene	730,000	1,000,000,000	46,000,000	1,420	7,880	8,720	2,810	544	779	526	668
Fluorene	390,000	580,000,000	27,000,000	ND	504	646	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	NLL	NLV	20,000	462	2,110	2,470	707	ND	ND	ND	ND
Phenanthrene	56,000	2,800,000	1,600,000	851	5,790	6,830	2,280	ND	461	ND	378
Pyrene	480,000	1,000,000,000	29,000,000	1,370	6,730	7,740	2,460	454	669	467	641

**Notes:**

1. Samples were collected on April 12, 2022.
2. NA denotes "Not Analyzed". "ND" denotes the indicated laboratory parameter was not detected above the laboratory reported detection limit (RDL).
3. The cleanup criteria are derived from Table 2, Soil Residential Generic Cleanup Criteria and Screening Levels, issued under part 201 of P.A. 451- dated June 25, 2018 (Table 2).
4. Shaded values exceed one or more cleanup criteria contained in Table 2 of P.A. 451, Part 201.
5. All samples were analyzed at Quantum Laboratories, Inc. located in Wixom, Michigan.
6. NLV = not likely to volatilize, NLL = not likely to leach, ID = Insufficient data available to establish criteria.
7. µg/kg denotes micrograms per kilogram.
8. A "ID" denotes insufficient data to develop criterion. For details, please refer to P.A. 451, Part 201, R 299.49 footnotes for Table 2.

**Table 3 - Summary of Soil Laboratory Analytical Results (Detected PCBs)  
Lenox Center Property  
100 Lenox Street  
Detroit, Michigan**

	Residential	Residential	Residential	Sample Location
Analyte	Drinking Water Protection Criteria (DWPC) (µg/kg)	Soil Volatilization to Indoor Air Inhalation Criteria (SVIAIC) (µg/kg)	Direct Contact Criteria (DCC) (µg/kg)	GP-6 (1'-2') (µg/kg)
<b>PCBs</b>				
Aroclor 1260	NLL	3,000,000	4,000	119

**Notes:**

1. Samples were collected on April 12, 2022.
2. NA denotes "Not Analyzed". "ND" denotes the indicated laboratory parameter was not detected above the laboratory reported detection limit (RDL).
3. The cleanup criteria are derived from Table 2, Soil Residential Generic Cleanup Criteria and Screening Levels, issued under part 201 of P.A. 451- dated June 25, 2018 (Table 2).
4. Shaded values exceed one or more cleanup criteria contained in Table 2 of P.A. 451, Part 201.
5. All samples were analyzed at Quantum Laboratories, Inc. located in Wixom, Michigan.
6. NLV = not likely to volatilize, ID= Insufficient data available to establish criteria.
7. µg/kg denotes micrograms per kilogram.

**Table 4 - Summary of Groundwater Analytical Results (Detected Metals and VOCs)**

**Lenox Center Property  
100 Lenox Street  
Detroit, Michigan**

Analytes	Residential Drinking Water Criteria (DWC) (µg/L)	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria (GVIAIC) (µg/L)	Sample Locations							
			GP-2 (µg/L)	GP-3 (µg/L)	Duplicate (GP-3) (µg/L)	GP-4 (µg/L)	GP-5 (µg/L)	GP-6 (µg/L)	GP-7 (µg/L)	GP-8 (µg/L)
<b>Metals</b>										
Arsenic	10	NLV	ND	ND	ND	ND	9	5	ND	ND
Barium	2,000	NLV	853	773	738	136	743	835	1,190	752
Cadmium	5	NLV	ND	ND	ND	ND	3	ND	ND	ND
Zinc	2,400	NLV	76	60	124	ND		87	ND	73
<b>VOCs</b>										
Benzene	5	5,600	ND	ND	ND	167	ND	ND	ND	ND
Ethylbenzene	74	110,000	ND	ND	ND	1	ND	ND	ND	ND
Napthalene	520	31,000	ND	ND	ND	8	ND	ND	ND	ND

- Notes:
1. Samples were collected on April 12, 2022.
  2. ND denotes not detected above the laboratory detection limit.
  3. The cleanup criteria are derived from Table 1 - Groundwater: Residential & Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels, dated December 21, 2020.
  4. Shaded value (if any) is above one or more Residential cleanup criteria.
  5. All samples were analyzed at Quantum Laboratories, Inc. of Wixom, Michigan.
  6. NLV = not likely to volatilize; NLL = not likely to leach, ID= insufficient data exist to establish a value, NA = Not Applicable.
  7. µg/L denotes micrograms per liter.
  8. Only laboratory parameters detected above laboratory detection limits are summarized.

**Table 5 - Summary of Groundwater Laboratory Analytical Results (Detected SVOCs)  
 Lenox Center Property  
 100 Lenox Street  
 Detroit, Michigan**

Analyte	Residential Drinking Water Criteria (DWC) (µg/L)	Residential Groundwater Volatilization To Indoor Air Inhalation Criteria (GVIAIC) (µg/L)	Sample Locations
			GP-4 (µg/L)
<b>SVOCs</b>			
Fluoranthene	210	210	2
Phenanthrene	52	1,000	5

- Notes:
1. Samples were collected on April 12, 2022.
  2. NA denotes: "Not Analyzed". ND denotes the indicated laboratory parameter was "Not Detected" above the laboratory reported detection limit (RDL).
  3. The cleanup criteria are derived from Table 1, Groundwater Residential Generic Cleanup Criteria and Screening Levels, issued under part 201 of P.A. 451, dated June 25, 2018 (Table 1).
  4. Shaded values exceed one or more applicable cleanup criteria contained in Table 1.
  5. All samples were analyzed at Quantum Laboratories, Inc. located in Wixom, Michigan.
  6. NLV denotes: "Not Likely to Volatilize", ID denotes: "Insufficient Data" that is available to establish criteria.
  7. ug/L denotes micrograms per liter.



## **APPENDIX D**

## ANALYTICAL REPORT

For: Atlas Technical Consultants (ATLAS)  
46555 Humboldt Dr. Ste. 100  
Novi MI 48377

**Report Number: 12226**  
Report Date: April 22, 2022  
Project Name: Lenox Center Property  
Project Number: 188BS22164  
Page: 1 of 93

Attn: Mr. Kevin LaForge

248-669-5140

Fax: 248-669-5147

### Sample Description

Eighteen (18) samples reported to be Soil (9) and Water (9) and identified as "Lenox Center Property", Detroit, MI, 4/12/22, Grab and:

- |                              |                               |
|------------------------------|-------------------------------|
| 1. GP-1, 2'-4', 9:57 (Soil)  | 10. GP-6, 1'-2', 13:05 (Soil) |
| 2. GP-2, 1'-3', 10:29 (Soil) | 11. GP-6, 13:17 (Water)       |
| 3. GP-2, 10:50 (Water)       | 12. GP-7, 1'-2', 13:40 (Soil) |
| 4. GP-3, 1'-3', 11:08 (Soil) | 13. GP-7, 13:55 (Water)       |
| 5. GP-3, 11:26 (Water)       | 14. GP-8, 2'-4', 14:20 (Soil) |
| 6. GP-4, 7'-8', 11:47 (Soil) | 15. GP-8, 14:30 (Water)       |
| 7. GP-4, 11:55 (Water)       | 16. Duplicate (Soil)          |
| 8. GP-5, 1'-2', 12:38 (Soil) | 17. Duplicate (Water)         |
| 9. GP-5, 12:45 (Water)       | 18. Trip Blank (Water)        |

### Analysis Requested

Chemical Analysis per SW-846 (SW) for:

1. Volatile Organic Compounds (VOC), Methods 8260B and 5035 (Soil) (All Samples)
2. Semi-Volatile Organic Compounds (SVOC), Method 8270C (Samples 1-17)
3. Polychlorinated Biphenyls (PCB), Method 8082A (Samples 1-17)
4. 10 Michigan Metals (Samples 1-17)
  - a) Arsenic, Method 7010
  - b) Barium, Method 7010
  - c) Cadmium, Method 7010
  - d) Chromium, Method 7010
  - e) Copper, Method 7010
  - f) Lead, Method 7010
  - g) Mercury, Method 7470A (Water) or Method 7471B (Soil)
  - h) Selenium, Method 7010
  - i) Silver, Method 7010
  - j) Zinc, Method 7010

## Analytical Results

Sample Description:		GP-1, 2'-4', 9:57, 4/12/22				
Laboratory ID:	12226-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Volatile Organic Compounds</b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
<b>continued</b>						

Sample Description:		GP-1, 2'-4', 9:57, 4/12/22				
Laboratory ID:	12226-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	94.3%	-	% Recovery	04/14/22	BD	
Toluene-d8	102%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	102%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-1, 2'-4', 9:57, 4/12/22					
Laboratory ID:	12226-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/20/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/20/22	BD	
Benzo(a)anthracene	669	330	µg/Kg, dry wt.	04/20/22	BD	
Benzo(b)fluoranthene	492	330	µg/Kg, dry wt.	04/20/22	BD	
Benzo(k)fluoranthene	914	330	µg/Kg, dry wt.	04/20/22	BD	
Benzo(g,h,i)perylene	516	330	µg/Kg, dry wt.	04/20/22	BD	
Benzo(a)pyrene	770	330	µg/Kg, dry wt.	04/20/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/20/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/20/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/20/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Chrysene	660	330	µg/Kg, dry wt.	04/20/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/20/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/20/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
continued						

Sample Description:	GP-1, 2'-4', 9:57, 4/12/22					
Laboratory ID:	12226-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	1,420	330	µg/Kg, dry wt.	04/20/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/20/22	BD	
Indeno(1,2,3-cd)pyrene	462	330	µg/Kg, dry wt.	04/20/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/20/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/20/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/20/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/20/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/20/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/20/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/20/22	BD	
Phenanthrene	851	330	µg/Kg, dry wt.	04/20/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
Pyrene	1,370	330	µg/Kg, dry wt.	04/20/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/20/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	43.6%	-	% Recovery	04/20/22	BD	
Phenol-d5	45.0%	-	% Recovery	04/20/22	BD	
Nitrobenzene-d5	38.8%	-	% Recovery	04/20/22	BD	
2-Fluorobiphenyl	51.3%	-	% Recovery	04/20/22	BD	
2,4,6-Tribromophenol	43.2%	-	% Recovery	04/20/22	BD	
Terphenyl-d14	40.8%	-	% Recovery	04/20/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative



Sample Description:		GP-1, 2'-4', 9:57, 4/12/22				
Laboratory ID:	12226-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	85.0%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	100%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	6,240	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	344,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	1,050	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	8,040	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	18,000,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	228,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	1,320	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	464	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	418,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	75.7%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/20/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-2, 1'-3', 10:29, 4/12/22				
Laboratory ID:	12226-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:		GP-2, 1'-3', 10:29, 4/12/22				
Laboratory ID:	12226-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	99.5%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	106%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-2, 1'-3', 10:29, 4/12/22					
Laboratory ID:	12226-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	GP-2, 1'-3', 10:29, 4/12/22					
Laboratory ID:	12226-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	42.9%	-	% Recovery	04/14/22	BD	
Phenol-d5	44.7%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	37.2%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	51.0%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	44.3%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	40.7%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-2, 1'-3', 10:29, 4/12/22				
Laboratory ID:	12226-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	99.6%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	117%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	2,420	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	246,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	261	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	16,300	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	126,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	181,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	136	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	124	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	86,800	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	83.3%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:		GP-2, 10:50, 4/12/22				
Laboratory ID:	12226-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						



Sample Description:		GP-2, 10:50, 4/12/22				
Laboratory ID:	12226-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	102%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	104%	-	% Recovery	04/14/22	BD	
continued						



Sample Description:		GP-2, 10:50, 4/12/22				
Laboratory ID:	12226-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Sample Description:	GP-2, 10:50, 4/12/22					
Laboratory ID:	12226-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	22.2%	-	% Recovery	04/14/22	BD	
Phenol-d5	22.0%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	42.3%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	49.3%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	37.8%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	43.2%	-	% Recovery	04/14/22	BD	
Continued						

Sample Description:		GP-2, 10:50, 4/12/22				
Laboratory ID:	12226-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	111%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	111%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	Not Detected	5	µg/L	04/19/22	DS	
Barium	853	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	76	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	GP-3, 1'-3', 11:08, 4/12/22					
Laboratory ID:	12226-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:		GP-3, 1'-3', 11:08, 4/12/22				
Laboratory ID:	12226-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	99.7%	-	% Recovery	04/14/22	BD	
Toluene-d8	105%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	105%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-3, 1'-3', 11:08, 4/12/22					
Laboratory ID:	12226-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	405	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	1,440	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	3,350	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	2,070	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	4,430	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	2,290	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	3,250	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	526	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	3,290	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	GP-3, 1'-3', 11:08, 4/12/22					
Laboratory ID:	12226-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	7,880	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	504	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	2,110	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	5,790	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	6,730	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	46.3%	-	% Recovery	04/14/22	BD	
Phenol-d5	47.9%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	41.8%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	57.4%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	46.1%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	43.2%	-	% Recovery	04/14/22	BD	
continued						



Sample Description:		GP-3, 1'-3', 11:08, 4/12/22				
Laboratory ID:	12226-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	97.4%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	111%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	2,790	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	506,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	1,330	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	20,000	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	110,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	848,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	423	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	214	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	164	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	591,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	86.9%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	



Sample Description:		GP-3, 11:26, 4/12/22				
Laboratory ID:	12226-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-3, 11:26, 4/12/22				
Laboratory ID:	12226-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	102%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	104%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-3, 11:26, 4/12/22				
Laboratory ID:	12226-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-3, 11:26, 4/12/22				
Laboratory ID:	12226-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	28.7%	-	% Recovery	04/14/22	BD	
Phenol-d5	26.9%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	36.6%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	46.3%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	45.1%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	38.6%	-	% Recovery	04/14/22	BD	
continued						

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 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-3, 11:26, 4/12/22				
Laboratory ID:	12226-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	100%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	128%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	Not Detected	5	µg/L	04/19/22	DS	
Barium	773	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	60	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
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Sample Description:	GP-4, 7'-8', 11:47, 4/12/22					
Laboratory ID:	12226-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:		GP-4, 7'-8', 11:47, 4/12/22				
Laboratory ID:	12226-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	101%	-	% Recovery	04/14/22	BD	
Toluene-d8	104%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	111%	-	% Recovery	04/14/22	BD	
continued						



Sample Description:	GP-4, 7'-8', 11:47, 4/12/22					
Laboratory ID:	12226-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	474	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzydine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	1,130	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	615	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	1,500	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	855	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	1,100	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	1,220	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						



Sample Description:	GP-4, 7'-8', 11:47, 4/12/22					
Laboratory ID:	12226-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	2,810	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	707	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	2,280	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	2,460	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	42.8%	-	% Recovery	04/14/22	BD	
Phenol-d5	44.2%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	39.7%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	53.6%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	38.3%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	39.5%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-4, 7'-8', 11:47, 4/12/22				
Laboratory ID:	12226-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	500	µg/Kg, dry wt.	04/18/22	DS	E, M
Aroclor 1221	Not Detected	500	µg/Kg, dry wt.	04/18/22	DS	E, M
Aroclor 1232	Not Detected	500	µg/Kg, dry wt.	04/18/22	DS	E, M
Aroclor 1242	Not Detected	500	µg/Kg, dry wt.	04/18/22	DS	E, M
Aroclor 1248	Not Detected	500	µg/Kg, dry wt.	04/18/22	DS	E, M
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2,700	µg/Kg, dry wt.	04/18/22	DS	E, M
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	118%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	130%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	2,630	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	448,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	1,800	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	27,200	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	36,800	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	199,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	112	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	265,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	85.7%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:		GP-4, 11:55, 4/12/22				
Laboratory ID:	12226-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	167	1	µg/L	04/20/22	BD	D
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Sample Description:		GP-4, 11:55, 4/12/22				
Laboratory ID:	12226-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	1	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	8	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	79.3%	-	% Recovery	04/14/22	BD	S, M
Toluene-d8	101%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	104%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-4, 11:55, 4/12/22				
Laboratory ID:	12226-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Sample Description:		GP-4, 11:55, 4/12/22				
Laboratory ID:	12226-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	2	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	5	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	31.5%	-	% Recovery	04/14/22	BD	
Phenol-d5	25.1%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	41.3%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	60.2%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	52.5%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	42.2%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-4, 11:55, 4/12/22				
Laboratory ID:	12226-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	108%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	112%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	Not Detected	5	µg/L	04/19/22	DS	
Barium	136	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	Not Detected	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative



Sample Description:	GP-5, 1'-2', 12:38, 4/12/22					
Laboratory ID:	12226-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:		GP-5, 1'-2', 12:38, 4/12/22				
Laboratory ID:	12226-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	98.3%	-	% Recovery	04/14/22	BD	
Toluene-d8	105%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	106%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-5, 1'-2', 12:38, 4/12/22					
Laboratory ID:	12226-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	453	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	332	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	GP-5, 1'-2', 12:38, 4/12/22					
Laboratory ID:	12226-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	544	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	454	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	43.5%	-	% Recovery	04/14/22	BD	
Phenol-d5	45.0%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	38.9%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	53.0%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	45.7%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	40.5%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-5, 1'-2', 12:38, 4/12/22				
Laboratory ID:	12226-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	104%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	104%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	992	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	178,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	6,710	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	19,200	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	21,700	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	Not Detected	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	31,800	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	88.7%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:		GP-5, 12:45, 4/12/22				
Laboratory ID:	12226-9	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						



Sample Description:		GP-5, 12:45, 4/12/22				
Laboratory ID:	12226-9	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	99.1%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	102%	-	% Recovery	04/14/22	BD	
continued						



Sample Description:	GP-5, 12:45, 4/12/22					
Laboratory ID:	12226-9	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-5, 12:45, 4/12/22				
Laboratory ID:	12226-9	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	37.9%	-	% Recovery	04/14/22	BD	
Phenol-d5	33.4%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	42.2%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	59.6%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	51.7%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	42.3%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-5, 12:45, 4/12/22				
Laboratory ID:	12226-9	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	118%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	126%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	9	5	µg/L	04/19/22	DS	
Barium	743	100	µg/L	04/20/22	DS	
Cadmium	3	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	87	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	GP-6, 1'-2', 13:05, 4/12/22					
Laboratory ID:	12226-10	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:		GP-6, 1'-2', 13:05, 4/12/22				
Laboratory ID:	12226-10	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	102%	-	% Recovery	04/14/22	BD	
Toluene-d8	105%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	106%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-6, 1'-2', 13:05, 4/12/22					
Laboratory ID:	12226-10	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	357	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	528	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	359	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	359	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits  
 S QC spike recovery outside of acceptance limits  
 R RPD outside of acceptance limits  
 E Reporting limit is elevated  
 D Result is from a dilution  
 J Result should be considered estimated  
 M Matrix interference observed  
 F Matrix Spike four times rule applied  
 C See Case Narrative

Sample Description:	GP-6, 1'-2', 13:05, 4/12/22					
Laboratory ID:	12226-10	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	779	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	461	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	669	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	44.7%	-	% Recovery	04/14/22	BD	
Phenol-d5	45.7%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	41.3%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	55.6%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	46.2%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	42.4%	-	% Recovery	04/14/22	BD	
continued						



Sample Description:		GP-6, 1'-2', 13:05, 4/12/22				
Laboratory ID:	12226-10	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	119	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	109%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	130%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	2,700	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	229,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	745	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	13,200	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	45,200	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	145,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	168	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	120,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	83.1%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	GP-6, 13:17, 4/12/22					
Laboratory ID:	12226-11	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-6, 13:17, 4/12/22				
Laboratory ID:	12226-11	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	93.6%	-	% Recovery	04/14/22	BD	
Toluene-d8	99.2%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	103%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-6, 13:17, 4/12/22				
Laboratory ID:	12226-11	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Sample Description:		GP-6, 13:17, 4/12/22				
Laboratory ID:	12226-11	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	36.3%	-	% Recovery	04/14/22	BD	
Phenol-d5	30.0%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	43.0%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	58.0%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	49.2%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	43.0%	-	% Recovery	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits  
 S QC spike recovery outside of acceptance limits  
 R RPD outside of acceptance limits  
 E Reporting limit is elevated  
 D Result is from a dilution  
 J Result should be considered estimated  
 M Matrix interference observed  
 F Matrix Spike four times rule applied  
 C See Case Narrative

Sample Description:		GP-6, 13:17, 4/12/22				
Laboratory ID:	12226-11	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	112%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	115%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	5	5	µg/L	04/19/22	DS	
Barium	835	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	Not Detected	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	GP-7, 1'-2', 13:46, 4/12/22					
Laboratory ID:	12226-12	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						



Sample Description:		GP-7, 1'-2', 13:46, 4/12/22				
Laboratory ID:	12226-12	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	98.5%	-	% Recovery	04/14/22	BD	
Toluene-d8	102%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	101%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-7, 1'-2', 13:46, 4/12/22					
Laboratory ID:	12226-12	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	425	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	GP-7, 1'-2', 13:46, 4/12/22					
Laboratory ID:	12226-12	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	526	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	467	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	42.9%	-	% Recovery	04/14/22	BD	
Phenol-d5	44.3%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	38.2%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	51.9%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	46.6%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	40.6%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-7, 1'-2', 13:46, 4/12/22				
Laboratory ID:	12226-12	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	106%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	125%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	1,460	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	296,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	536	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	12,900	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	32,800	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	208,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	401	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	133,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	87.9%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	GP-7, 13:55, 4/12/22					
Laboratory ID:	12226-13	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Sample Description:		GP-7, 13:55, 4/12/22				
Laboratory ID:	12226-13	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	98.0%	-	% Recovery	04/14/22	BD	
Toluene-d8	102%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	105%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-7, 13:55, 4/12/22				
Laboratory ID:	12226-13	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						



Sample Description:		GP-7, 13:55, 4/12/22				
Laboratory ID:	12226-13	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	24.4%	-	% Recovery	04/14/22	BD	
Phenol-d5	23.4%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	42.9%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	52.4%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	40.0%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	40.8%	-	% Recovery	04/14/22	BD	
Continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits  
 S QC spike recovery outside of acceptance limits  
 R RPD outside of acceptance limits  
 E Reporting limit is elevated  
 D Result is from a dilution  
 J Result should be considered estimated  
 M Matrix interference observed  
 F Matrix Spike four times rule applied  
 C See Case Narrative

Sample Description:		GP-7, 13:55, 4/12/22				
Laboratory ID:	12226-13	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	112%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	115%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	Not Detected	5	µg/L	04/19/22	DS	
Barium	1,190	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	73	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	GP-8, 2'-4', 14:20, 4/12/22					
Laboratory ID:	12226-14	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:		GP-8, 2'-4', 14:20, 4/12/22				
Laboratory ID:	12226-14	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	98.1%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	108%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	GP-8, 2'-4', 14:20, 4/12/22					
Laboratory ID:	12226-14	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzidine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	378	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	705	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	381	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	414	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	416	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	GP-8, 2'-4', 14:20, 4/12/22					
Laboratory ID:	12226-14	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	668	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	378	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	641	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	45.0%	-	% Recovery	04/14/22	BD	
Phenol-d5	48.0%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	42.4%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	59.7%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	47.7%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	43.5%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-8, 2'-4', 14:20, 4/12/22				
Laboratory ID:	12226-14	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	113%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	125%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	4,760	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	3,720,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	168,000	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	168,000	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	7,660,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	3,900,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	3,730	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	826	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	3,190,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	81.3%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	



Sample Description:	GP-8, 14:30, 4/12/22					
Laboratory ID:	12226-15	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Sample Description:		GP-8, 14:30, 4/12/22				
Laboratory ID:	12226-15	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	101%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	103%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:		GP-8, 14:30, 4/12/22				
Laboratory ID:	12226-15	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Sample Description:		GP-8, 14:30, 4/12/22				
Laboratory ID:	12226-15	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	27.1%	-	% Recovery	04/14/22	BD	
Phenol-d5	25.3%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	37.4%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	51.6%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	44.5%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	41.4%	-	% Recovery	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:		GP-8, 14:30, 4/12/22				
Laboratory ID:	12226-15	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	110%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	108%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	Not Detected	5	µg/L	04/19/22	DS	
Barium	752	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	Not Detected	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-16	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	04/14/22	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	04/14/22	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-16	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	04/14/22	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	04/14/22	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	04/14/22	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	97.5%	-	% Recovery	04/14/22	BD	
Toluene-d8	102%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	107%	-	% Recovery	04/14/22	BD	
continued						



Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-16	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>						
Acenaphthene	445	330	µg/Kg, dry wt.	04/14/22	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Anthracene	1,760	330	µg/Kg, dry wt.	04/14/22	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/14/22	BD	
Benzydine	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)anthracene	3,680	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(b)fluoranthene	1,760	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(k)fluoranthene	5,560	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(g,h,i)perylene	2,860	330	µg/Kg, dry wt.	04/14/22	BD	
Benzo(a)pyrene	3,830	330	µg/Kg, dry wt.	04/14/22	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Carbazole	657	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Chrysene	3,770	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-butylphthalate	405	330	µg/Kg, dry wt.	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dibenzofuran	401	330	µg/Kg, dry wt.	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
continued						

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-16	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	8,720	330	µg/Kg, dry wt.	04/14/22	BD	
Fluorene	646	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	2,470	330	µg/Kg, dry wt.	04/14/22	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/14/22	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/14/22	BD	
Phenanthrene	6,830	330	µg/Kg, dry wt.	04/14/22	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
Pyrene	7,740	330	µg/Kg, dry wt.	04/14/22	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	38.7%	-	% Recovery	04/14/22	BD	
Phenol-d5	41.7%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	36.6%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	52.6%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	47.4%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	42.3%	-	% Recovery	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-16	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	115%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	144%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	2,800	100	µg/Kg, dry wt.	04/19/22	DS	
Barium	704,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Cadmium	1,370	200	µg/Kg, dry wt.	04/19/22	DS	
Chromium	36,000	2,000	µg/Kg, dry wt.	04/19/22	DS	
Copper	209,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Lead	1,730,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
Mercury	960	50	µg/Kg, dry wt.	04/14/22	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	04/19/22	DS	
Silver	238	100	µg/Kg, dry wt.	04/19/22	DS	
Zinc	792,000	1,000	µg/Kg, dry wt.	04/19/22	DS	
<b>Analysis Information</b>						
Dry Weight Solids	84.8%	-	% by weight	04/13/22	DS	
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/13/22	DS	
Metals Digestion	Completed	-	-	04/18/22	LB	

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-17	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-17	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	99.8%	-	% Recovery	04/14/22	BD	
Toluene-d8	101%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	102%	-	% Recovery	04/14/22	BD	
continued						

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-17	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>Semi-Volatile Organic Cmpds</b>			☐			
Acenaphthene	Not Detected	5	µg/L	04/14/22	BD	
Acenaphthylene	Not Detected	5	µg/L	04/14/22	BD	
Aniline	Not Detected	4	µg/L	04/14/22	BD	
Anthracene	Not Detected	5	µg/L	04/14/22	BD	
Azobenzene	Not Detected	2	µg/L	04/14/22	BD	
Benzidine	Not Detected	2	µg/L	04/14/22	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/14/22	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/14/22	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/14/22	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/14/22	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/14/22	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/14/22	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Carbazole	Not Detected	10	µg/L	04/14/22	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/14/22	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/14/22	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/14/22	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/14/22	BD	
Chrysene	Not Detected	1	µg/L	04/14/22	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/14/22	BD	
Dibenzofuran	Not Detected	4	µg/L	04/14/22	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/14/22	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/14/22	BD	
Diethylphthalate	Not Detected	5	µg/L	04/14/22	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/14/22	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/14/22	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits  
 S QC spike recovery outside of acceptance limits  
 R RPD outside of acceptance limits  
 E Reporting limit is elevated  
 D Result is from a dilution  
 J Result should be considered estimated  
 M Matrix interference observed  
 F Matrix Spike four times rule applied  
 C See Case Narrative

Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-17	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>SVOCs continued</b>						
Fluoranthene	Not Detected	1	µg/L	04/14/22	BD	
Fluorene	Not Detected	5	µg/L	04/14/22	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/14/22	BD	
Hexachloroethane	Not Detected	5	µg/L	04/14/22	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/14/22	BD	
Isophorone	Not Detected	5	µg/L	04/14/22	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
4-Methylphenol	Not Detected	10	µg/L	04/14/22	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/14/22	BD	
Nitrobenzene	Not Detected	3	µg/L	04/14/22	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/14/22	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/14/22	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/14/22	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/14/22	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/14/22	BD	
Phenanthrene	Not Detected	2	µg/L	04/14/22	BD	
Phenol	Not Detected	5	µg/L	04/14/22	BD	
Pyrene	Not Detected	5	µg/L	04/14/22	BD	
Pyridine	Not Detected	20	µg/L	04/14/22	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/14/22	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
2-Fluorophenol	28.9%	-	% Recovery	04/14/22	BD	
Phenol-d5	31.9%	-	% Recovery	04/14/22	BD	
Nitrobenzene-d5	37.0%	-	% Recovery	04/14/22	BD	
2-Fluorobiphenyl	47.1%	-	% Recovery	04/14/22	BD	
2,4,6-Tribromophenol	45.6%	-	% Recovery	04/14/22	BD	
Terphenyl-d14	40.5%	-	% Recovery	04/14/22	BD	
continued						

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative



Sample Description:	Duplicate, 4/12/22					
Laboratory ID:	12226-17	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>PCBs</b>						
Aroclor 1016	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1221	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1232	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1242	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1248	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1254	Not Detected	0.2	µg/L	04/18/22	DS	
Aroclor 1260	Not Detected	0.2	µg/L	04/18/22	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	04/18/22	DS	
<b>Surrogate Standards</b>						
Tetrachloro-m-xylene	115%	-	% Recovery	04/18/22	DS	
Decachlorobiphenyl	121%	-	% Recovery	04/18/22	DS	
<b>Michigan Metals</b>						
Arsenic	Not Detected	5	µg/L	04/19/22	DS	
Barium	738	100	µg/L	04/20/22	DS	
Cadmium	Not Detected	1	µg/L	04/19/22	DS	
Chromium	Not Detected	5	µg/L	04/19/22	DS	
Copper	Not Detected	20	µg/L	04/19/22	DS	E, C
Lead	Not Detected	3	µg/L	04/19/22	DS	
Mercury	Not Detected	0.2	µg/L	04/14/22	DS	
Selenium	Not Detected	5	µg/L	04/19/22	DS	
Silver	Not Detected	0.2	µg/L	04/19/22	DS	
Zinc	124	50	µg/L	04/19/22	DS	
<b>Analysis Information</b>						
SVOC Extraction	Completed	-	-	04/14/22	LB	
PCB Extraction	Completed	-	-	04/18/22	LB	
Mercury Digestion	Completed	-	-	04/14/22	LB	
Metals Digestion	Completed	-	-	04/18/22	LB	

Data Qualifiers: I Internal Standard results outside of acceptance limits E Reporting limit is elevated M Matrix interference observed  
 S QC spike recovery outside of acceptance limits D Result is from a dilution F Matrix Spike four times rule applied  
 R RPD outside of acceptance limits J Result should be considered estimated C See Case Narrative

Sample Description:	Trip Blank					
Laboratory ID:	12226-18	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b><i>Volatile Organic Compounds</i></b>						
Acetone	Not Detected	50	µg/L	04/14/22	BD	
Benzene	Not Detected	1	µg/L	04/14/22	BD	
Bromobenzene	Not Detected	1	µg/L	04/14/22	BD	
Bromochloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromodichloromethane	Not Detected	1	µg/L	04/14/22	BD	
Bromoform	Not Detected	1	µg/L	04/14/22	BD	
Bromomethane	Not Detected	5	µg/L	04/14/22	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	04/14/22	BD	
n-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
sec-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
tert-Butylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Carbon disulfide	Not Detected	5	µg/L	04/14/22	BD	
Carbon tetrachloride	Not Detected	1	µg/L	04/14/22	BD	
Chlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Chloroethane	Not Detected	5	µg/L	04/14/22	BD	
Chloroform	Not Detected	1	µg/L	04/14/22	BD	
Chloromethane	Not Detected	5	µg/L	04/14/22	BD	
2-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
4-Chlorotoluene	Not Detected	5	µg/L	04/14/22	BD	
Dibromochloromethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	04/14/22	BD	
Dibromomethane	Not Detected	5	µg/L	04/14/22	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	04/14/22	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	04/14/22	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
continued						

Sample Description:	Trip Blank					
Laboratory ID:	12226-18	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<b>VOCs continued</b>						
1,3-Dichloropropene	Not Detected	1	µg/L	04/14/22	BD	
Ethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	04/14/22	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	04/14/22	BD	
2-Hexanone	Not Detected	50	µg/L	04/14/22	BD	
Isopropyl benzene	Not Detected	5	µg/L	04/14/22	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	04/14/22	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	04/14/22	BD	
Methylene chloride	Not Detected	5	µg/L	04/14/22	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/14/22	BD	
Naphthalene	Not Detected	5	µg/L	04/14/22	BD	
n-Propyl benzene	Not Detected	1	µg/L	04/14/22	BD	
Styrene	Not Detected	1	µg/L	04/14/22	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	04/14/22	BD	
Tetrachloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Tetrahydrofuran	Not Detected	90	µg/L	04/14/22	BD	
Toluene	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	04/14/22	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	04/14/22	BD	
Trichloroethylene	Not Detected	1	µg/L	04/14/22	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	04/14/22	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	04/14/22	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	04/14/22	BD	
Vinyl Acetate	Not Detected	100	µg/L	04/14/22	BD	
Vinyl chloride	Not Detected	1	µg/L	04/14/22	BD	
Xylene (Total)	Not Detected	3	µg/L	04/14/22	BD	
<b>Surrogate Standards</b>						
1,2-Dichloroethane-d4	98.1%	-	% Recovery	04/14/22	BD	
Toluene-d8	103%	-	% Recovery	04/14/22	BD	
4-Bromofluorobenzene	104%	-	% Recovery	04/14/22	BD	

## Quality Control

### VOC Matrix Spike Data

Spiked Sample: 12226-1		Matrix: Soil		Units: ppb in extract				Data	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Qualifiers	
1,1-Dichloroethene	0.0	25	22	22	88	88	0.0		
Benzene	0.0	25	24	25	96	100	4.1		
Trichloroethene	0.0	25	24	25	96	100	4.1		
Toluene	0.0	25	23	23	92	92	0.0		
Chlorobenzene	0.0	25	24	24	96	96	0.0		

Spiked Sample: 12226 LCS		Matrix: Water		Units: ppb in solution				Data	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Qualifiers	
1,1-Dichloroethene	0.0	25	29	28	116	112	3.5		
Benzene	0.0	25	24	26	96	104	8.0		
Trichloroethene	0.0	25	24	25	96	100	4.1		
Toluene	0.0	25	22	24	88	96	8.7		
Chlorobenzene	0.0	25	23	24	92	96	4.3		

### SVOC Matrix Spike Data

Spiked Sample: 12226-2		Matrix: Soil		Units: ppm in extract				Data	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Qualifiers	
2-Chlorophenol	0.0	100	51	50	51	50	2.0		
1,4-Dichlorobenzene	0.0	50	20	20	40	40	0.0		
1,2,4-Trichlorobenzene	0.0	50	18	18	36	36	0.0		
4-Chloro-3-methylphenol	0.0	100	56	57	56	57	1.8		
Acenaphthene	0.0	50	21	21	42	42	0.0		
Pentachlorophenol	0.0	100	54	55	54	55	1.8		

Spiked Sample: 12226 LCS		Matrix: Water		Units: ppm in extract				Data	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Qualifiers	
2-Chlorophenol	0.0	100	47	43	47	43	8.9		
1,4-Dichlorobenzene	0.0	50	20	19	40	38	5.1		
1,2,4-Trichlorobenzene	0.0	50	18	16	36	32	11.8		
4-Chloro-3-methylphenol	0.0	100	54	50	54	50	7.7		
Acenaphthene	0.0	50	21	19	42	38	10.0		
Pentachlorophenol	0.0	100	53	51	53	51	3.8		

## Quality Control, continued

### **PCB Matrix Spike Data**

Spiked Sample: 12226-1		Matrix: Soil		Units: ppm in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Aroclor 1260	0.000	0.200	0.179	0.227	90	114	23.7	

Spiked Sample: 12226 LCS		Matrix: Water		Units: ppm in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Aroclor 1260	0.000	0.200	0.163	0.161	81	81	1.0	

### **Metals Matrix Spike Data**

Spiked Sample: 12226-8 (LCS for Ba, Cu, 12226-15 for Hg)				Matrix: Soil		Units: ppb in solution		
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Arsenic	5.0	12.5	14.7	18.4	78	108	22.5	F S, M
Barium	0	100	95	77.6	95	78	19.8	
Cadmium	0.9	1.3	2.2	2.3	104	112	4.5	
Chromium	33.5	10	43.0	44.9	95	113	4.2	
Copper	4.0	25	27.2	26.7	93	91	1.9	
Lead	109	25	125	125	NC	NC	0.2	
Mercury	0.0	5.0	4.7	4.7	93	94	0.9	
Selenium	0.4	25	0.2	0.4	-	-	58.1	
Silver	0.0	5.0	4.0	4.0	79	80	1.3	
Zinc	156	500	604	624	90	94	3.3	

Spiked Sample: 12226-9 (LCS for Ba, 12226-15 for Hg)				Matrix: Water		Units: ppb in solution		
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Arsenic	9.3	12.5	25.2	22.8	127	108	10.1	S, M
Barium	0	100	111	92.8	111	93	17.9	
Cadmium	2.8	1.3	1.3	1.3	-	-	5.0	
Chromium	0.5	10	13.2	12.2	126	117	7.7	
Copper	12.0	25	43.3	41.7	125	119	3.8	
Lead	2.6	25	19.0	19.0	65	65	0.0	
Mercury	0.0	5.0	4.7	4.7	93	94	0.9	
Selenium	0.6	25	5.3	5.2	19	18	1.9	
Silver	0.0	5.0	3.2	2.9	64	58	10.5	
Zinc	87	500	547	385	92	60	34.8	

## Case Narrative

Samples 12226-3, 5, 7, 9, 11, 13 and 15 were filtered with a 0.45 $\mu$ m filter prior to digestion and analysis of metals per client's request.

The reporting limit for copper in water samples was elevated due to the presence of the analyte in the associated method blank.

All method protocols and quality control requirements were satisfied for all samples.

## Notes

- (1) Quality Control Limits available upon request.
- (2) Results are applicable only to the sample tested.
- (3) All samples will be discarded after 30 days unless the laboratory receives other instructions.
- (4) Chain of Custody document attached.

QUANTUM LABORATORIES, INC.



David W. Starr  
Analytical Chemistry Manager







