

**ENFORCEMENT CONFIDENTIAL**

Before releasing this report, please check with the author to determine if any ongoing enforcement action is pending.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, ILLINOIS 60604**

**DATE:** August 19, 2021

**SUBJECT:** GEOSPATIAL MONITORING OF AIR POLLUTION REPORT FOR  
GRAPHICS PACKAGING AND CITY OF KALAMAZOO WATER  
RECLAMATION FACILITY, KALAMAZOO, MI.

**DATA ANALYSIS  
PREPARED BY:** Marta Fuoco, Physical Scientist  
Air Monitoring and Analysis Section

**FIELD MONITORING  
CONDUCTED BY:** Scott Hamilton, Environmental Scientist  
Air Monitoring and Analysis Section

Kate Haile, Physical Scientist  
Air Monitoring and Analysis Section

**FIELD MONITORING  
REQUESTED BY:** Kathy Triantafillou – EPA Region 5/TMMPO  
Kosta Loukeris – EPA Region 5/ECAD  
Rex Lane – Michigan EGLE

**DATES OF FIELD  
MONITORING:** May 11-13, 2021

**REPORT  
AUTHOR:** Marta Fuoco, Physical Scientist  
Air Monitoring and Analysis Section

**REPORT  
AUTHORIZED BY:** Michael Compher  
Chief, Air Monitoring and Analysis Section

*This page left intentionally blank*

## Table of Contents

BACKGROUND:.....	1
METHODS:.....	2
RESULTS: .....	3
GENERAL FINDINGS:.....	3
KALAMAZOO Community MOBILE MEASUREMENTS: May 11-13, 2021.....	5
KALAMAZOO GRAPHICS PACKAGING MOBILE MEASUREMENTS: May 11-13, 2021.....	6
KALAMAZOO SCOUTING MOBILE MEASUREMENTS: May 11-13, 2021 .....	8
KALAMAZOO CANISTER LOCATIONS.....	10
APPENDIX I – FIELD NOTES.....	12
APPENDIX II - QC CHECKS.....	20
APPENDIX III – CANISTER REPORT.....	25

## Table of Figures:

<i>Figure 1: Mobile transect (blue path) driven in Kalamazoo community downwind of Graphics Packaging .....</i>	<i>5</i>
<i>Figure 2: Mobile transect (blue path) driven around Graphics Packaging and Water Reclamation Facility .....</i>	<i>7</i>
<i>Figure 3: Mobile transect (blue path) driven in Kalamazoo - scouting .....</i>	<i>8</i>
<i>Figure 4: H<sub>2</sub>S time-series 210511_MA06 .....</i>	<i>9</i>
<i>Figure 5: Mobile ribbon H<sub>2</sub>S plot 210511_MA06; S. Sprinkle Rd and Park Circle Dr. (Multiple facilities complex - Kaiser Aluminum).....</i>	<i>9</i>
<i>Figure 6: Canister locations .....</i>	<i>11</i>

## Table of Tables

<i>Table 1: Maximum one-second concentrations and corresponding figure numbers from mobile transects for measured parameters in the Kalamazoo community; May 11-13, 2021 .....</i>	<i>5</i>
<i>Table 2: Maximum one-second concentrations and corresponding figure numbers from mobile transects for measured parameters near Graphics Packaging; May 11-13, 2021 .....</i>	<i>6</i>
<i>Table 3: Maximum one-second concentrations and corresponding figure numbers from scouting; May 11-13, 2021 .....</i>	<i>8</i>
<i>Table 4: Location of canister deployment for subsequent TO-15 analysis.....</i>	<i>10</i>

## BACKGROUND:

On May 11-13, 2021, the U.S. Environmental Protection Agency Region 5 deployed the Geospatial Monitoring of Air Pollutants (GMAP) mobile monitoring platform. The GMAP monitored for hydrogen sulfide (H<sub>2</sub>S), methane (CH<sub>4</sub>), benzene (C<sub>6</sub>H<sub>6</sub>), toluene (C<sub>7</sub>H<sub>8</sub>), and p-xylene (C<sub>8</sub>H<sub>10</sub>), near Graphics Packaging, City of Kalamazoo Water Reclamation Facility, Textile Systems, Kalamazoo Metal Recyclers, Kaiser Aluminum, Summitt Polymers, and surrounding areas in Kalamazoo, MI.

On Tuesday, May 11, 2021, EPA arrived in Kalamazoo, MI and conducted quality control (QC) checks of the GMAP mobile monitoring platform. EPA also met with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to obtain six canisters and two bottles to collect ambient air samples for subsequent TO-15 analysis by the EGLE laboratory. After all QC checks passed for GMAP monitoring equipment, EPA began sampling in the community west of Graphics Packaging (Community), around the perimeter of Graphics Packaging and City of Kalamazoo Water Reclamation Facility and surrounding areas (Graphics Packaging), and around four facilities identified by EPA enforcement: Textile Systems, Kalamazoo Metal Recyclers, Kaiser Aluminum, and Summitt Polymers (Scouting). EPA field staff observed odors at the perimeter of Graphics Packaging and the City of Kalamazoo Water Reclamation Facility, but these specific compounds causing the odors were not detected by the monitoring instruments operated in the GMAP. Two composite canisters for subsequent TO-15 analysis were deployed.

On Wednesday, May 12, EPA monitored around the perimeter of Graphics Packaging and the Reclamation Facility. Field staff noted two distinct odors – a “wastewater treatment smell” directly south of the Reclamation Facility, and a “bad” odor detected as they traveled west from the Reclamation Facility and directly south and downwind of Graphics Packaging.<sup>1</sup> Three grab samples were collected in two bottles and one canister, and two additional composite canisters were deployed (detailed below). EPA also monitored in the Community (Community) and around the four facilities identified by EPA enforcement (Scouting) at dawn and dusk.

On May 13, 2021, EPA took one additional canister grab sample, performed QC on the GMAP monitoring equipment checks that passed, and concluded sampling. Field conditions were favorable for monitoring during this campaign. The supporting documentation, including the pre- and post-monitoring QC checks from this campaign have been reviewed and the data validated according to the most recent Quality Assurance Project Plan (QAPP) and Standard Operating Procedure (SOP). Additional field notes from this campaign can be found in APPENDIX I, and QC documentation in APPENDIX II.

In all, EPA conducted:

- 33 GMAP mobile transects;
- 4 composite canister measurements; and
- 4 grab canister measurements.

---

<sup>1</sup> GMAP Graphics Packaging Field notes

## METHODS:

Region 5's GMAP uses a Picarro G2204 cavity ringdown spectroscopy analyzer (SN 2267-BFADS2013) to measure  $\text{H}_2\text{S}$  and  $\text{CH}_4$  and a DUVAS DV3000 differential ultra-violet absorption spectrometer (DUVAS) (SN UV3000-2016067-DV1019) to measure  $\text{C}_6\text{H}_6$ ,  $\text{C}_7\text{H}_8$ , and  $\text{C}_8\text{H}_{10}$ . The collected data are integrated with global positioning system (GPS) location information and meteorological parameters, when available, under a common time stamp using the specially designed Mobile Emission Monitoring software to quantify air pollutant concentrations and source trajectories. Additional information can be found in the GMAP SOP (R5-ARD-0002-r5) and GMAP QAPP (V4.0 2017-05-30). In addition to the GMAP measurements, EPA Air Method, Toxic Organics – 15 (TO-15) canister samples were collected to identify the presence of volatile organic compounds (VOC) for analysis by gas chromatography/mass spectrometry (GC/MS) by EGLE's laboratory.

Pollutant concentration values from the GMAP are detailed in the report when data are greater than the reporting limit (RL) or, through a weight of evidence approach, when greater than the minimum detection limit (MDL). Typically, values less than the RL but greater than the MDL are indicated as "<RL" and values less than the MDL are indicated as "<MDL". All values less than the MDL are reported as null. All values greater than the MDL will appear in the data files. Values less than the RL, but greater than the MDL, are reported with a qualifier code. Any values greater than the highest QC check concentration will be flagged with a qualifier code indicating that they fall out of the calibration range for the instrument.

Figures below were created in Google Earth, a geospatial mapping application, and R, an open-source programming language for statistical computing. Ribbons corresponding to each mobile transect represent concentrations that are geospatially overlaid on a Google Earth satellite image, illustrating the magnitude of the air pollutants measured during the transect. The colors on these ribbons indicate the magnitude of concentrations within the individual transect, and do not correspond to any benchmarks or levels of concern. The time-series located under each corresponding ribbon visual depiction demonstrate measured concentrations over individual transects. Figures were included for transects with measured concentrations above a threshold value.

Wind speed (WS) and wind direction (WD) are represented by white arrows. The direction of the arrow and length of the bar corresponds to WD and WS, respectively. The longer the wind bar, the greater the WS. Graphics that do not depict wind bars indicate that the GMAP vehicle was moving at a speed too fast for an accurate WS or WD measurement. Obstructions such as tree lines can also impact air flow, resulting in WS/WD measurements that may not be representative of the broader WS/WD in the vicinity of monitoring.

Stationary measurements allow for several additional analyses. The bivariate polar plot is a function in the R open-air statistical package that plots concentration in polar coordinates by WS and WD. In these plots, the weighted mean of a pollutant concentration (measured by the

GMAP during stationary collection) multiplied by the frequency of occurrence identifies the WD and WS conditions that dominate the overall mean and provides an indication of the direction of the source(s) of emissions measured by the GMAP. These plots are overlaid on a Google Earth satellite image, with the coordinate origin centered on the GPS coordinates recorded during each stationary measurement data collection. The resulting graphics, where available, provide a visual indication of source attribution and identification.

## RESULTS:

Concentrations above the detection limit were measured for H<sub>2</sub>S and CH<sub>4</sub> during this campaign; data above the reporting limit were analyzed.

All concentrations were compared to threshold values, including the Agency for Toxic Substances and Disease Registry's (ATSDR) Minimal Risk Levels (MRL).<sup>2</sup> Tables 1-3 depict the maximum one-second measured concentration for each transect, instrument minimum detection limit (MDL), and ATSDR MRL for each parameter. The figures associated with each data file are listed in Tables 1-3. An '\*' before the monitoring data file name denotes the files which have time-series, ribbon, and/or polar plots included. Table 4 and Figure 6 depicts the location of the canister samples.

Following the general findings, the results are presented by location and by day.

## GENERAL FINDINGS:

### **Kalamazoo Community mobile transects:**

EPA measured in the community on May 11-13, 2021 (Table 1).

- Outside the fenceline (Table 1):
  - Background levels of CH<sub>4</sub> were detected above the MDL and RL. Values below the RL and MDL were detected for H<sub>2</sub>S, C<sub>6</sub>H<sub>6</sub>, C<sub>7</sub>H<sub>8</sub>, and C<sub>8</sub>H<sub>10</sub>.

---

<sup>2</sup> MRLs are intended to serve as a screening tool to help public health professionals decide where to look at a pollutant more closely. To be protective and conservative, ATSDR sets MRLs below levels that, based on current information, may cause adverse health effects. Exposure to a level above the MRL does not mean that adverse health effects will occur. Rather, it indicates the need to investigate the situation more closely.  
<https://www.atsdr.cdc.gov/toxprofiles/tp114.pdf>

### **Kalamazoo Graphics Packaging and City of Kalamazoo Water Reclamation Facility mobile transects:**

EPA measured outside the fenceline of both facilities on May 11-13, 2021 (Table 2).

- Outside the fenceline (Table 2):
  - Background levels of CH<sub>4</sub> were detected above the MDL and RL. Values below the RL and MDL were detected for H<sub>2</sub>S, C<sub>6</sub>H<sub>6</sub>, C<sub>7</sub>H<sub>8</sub>, and C<sub>8</sub>H<sub>10</sub>.

### **Kalamazoo Scouting mobile transects:**

EPA monitored outside the fenceline of four facilities identified by EPA enforcement: Textile Systems, Kalamazoo Metal Recyclers, Kaiser Aluminum, and Summitt Polymers on May 11-13, 2021 (Table 3).

- Outside the fenceline (Table 3):
  - Background levels of CH<sub>4</sub> were detected above the MDL and RL. Values below the RL and MDL were detected for C<sub>6</sub>H<sub>6</sub>, C<sub>7</sub>H<sub>8</sub>, and C<sub>8</sub>H<sub>10</sub>. One transect measured several seconds of H<sub>2</sub>S data above the MDL and RL near S. Sprinkle Rd and Park Circle Dr; a graphic is provided (Figure 4-5) to demonstrate the limited data above the MDL and RL that was measured.

### **Canister sampling:**

EPA collected 8 canisters (4 grab and 4 composite samples) that were analyzed by EGLE laboratory; the locations of these samples are listed below in Table 4 and Figure 6. The results in Appendix III show that of those concentrations identified above the RL, none approached threshold values. In addition to the standard TO-15 analysis, EGLE laboratory search for non-target peaks by running a library search on any non-targeted or unknown peaks found in the sample. No additional identifiable peaks were found in any of the samples.

Odors were detected by EPA field staff, as described in the field notes. Since these odor events are not reflected in the GMAP or canister data collected while in these odor plumes, either the odors are not caused by pollutants measured by the GMAP or TO-15 canister analysis or are present at low concentrations below their detection thresholds.



## KALAMAZOO Community MOBILE MEASUREMENTS: May 11-13, 2021

MOBILE MEASUREMENTS – MAY 11-13, 2021	H <sub>2</sub> S (PPB)	CH <sub>4</sub> (PPM)	BEN (PPB)	TOL (PPB)	XYP (PPB)	FIGURE
ATSDR ACUTE (≤14 DAY) MRL	70	-	9	2000	2000	
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20	-	6	-	600	
ATSDR CHRONIC (≥365 DAYS) MRL	-	-	3	1000	50	
GMAP MDL	7.86	0.00	4.80	3.69	4.05	
GMAP RL	23.58	0.00	24.00	18.45	20.25	
	max 1-second concentration					
<b>210511_MA01</b>	<RL	2.06	<MDL	<RL	<RL	NA
<b>210512_MA01</b>	<RL	2.48	<MDL	<RL	<MDL	NA
<b>210512_MA02</b>	<RL	2.04	<RL	<RL	<RL	NA
<b>210512_MA03</b>	<RL	2.04	<MDL	<RL	<RL	NA
<b>210512_MA04</b>	<RL	2.04	<MDL	<RL	<MDL	NA
<b>210512_MA05</b>	<RL	2.14	<RL	<RL	<RL	NA
<b>210513_MA01</b>	<MDL	2.53	<MDL	<RL	<MDL	NA
<b>210513_MA02</b>	<RL	2.39	<MDL	<RL	<MDL	NA
<b>210513_MA03</b>	<RL	2.32	<MDL	<RL	<MDL	NA

Table 1: Maximum one-second concentrations and corresponding figure numbers from mobile transects for measured parameters in the Kalamazoo community; May 11-13, 2021

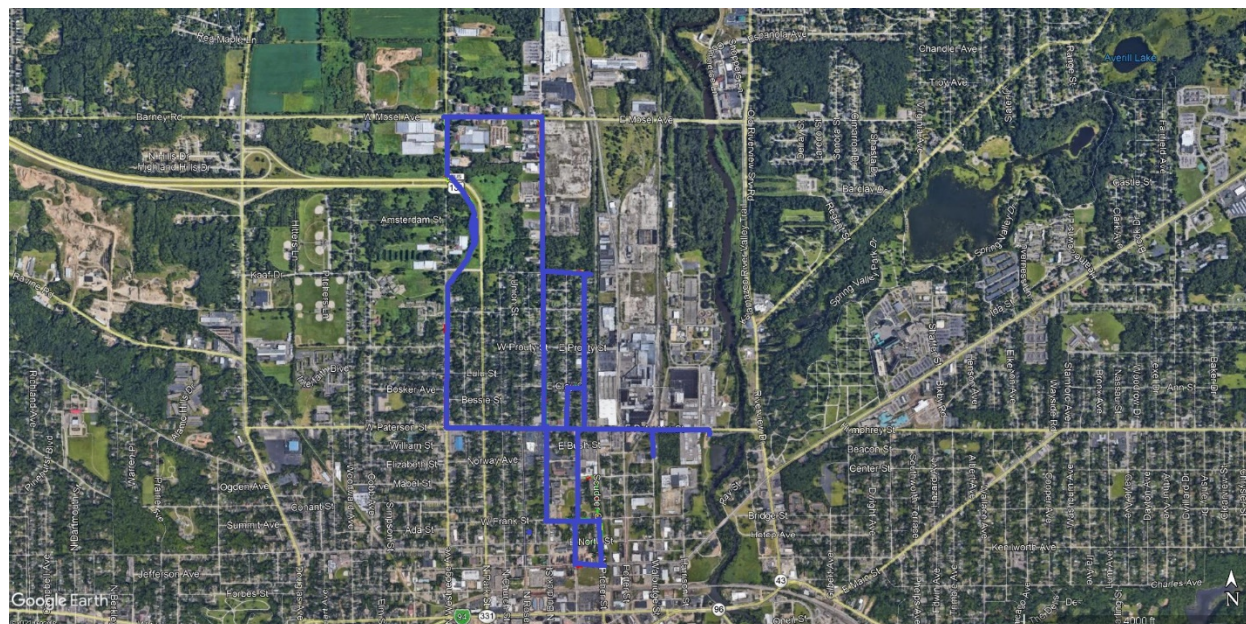


Figure 1: Mobile transect (blue path) driven in Kalamazoo community downwind of Graphics Packaging

ENFORCEMENT CONFIDENTIAL

## KALAMAZOO GRAPHICS PACKAGING MOBILE MEASUREMENTS: May 11-13, 2021

<b>MOBILE MEASUREMENTS – MAY 11-13, 2021</b>	<b>H<sub>2</sub>S (PPB)</b>	<b>CH<sub>4</sub> (PPM)</b>	<b>BEN (PPB)</b>	<b>TOL (PPB)</b>	<b>XYP (PPB)</b>	<b>FIGURE</b>
ATSDR ACUTE (≤14 DAY) MRL	70	-	9	2000	2000	
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20	-	6	-	600	
ATSDR CHRONIC (≥365 DAYS) MRL	-	-	3	1000	50	
GMAP MDL	7.86	0.00	4.80	3.69	4.05	
GMAP RL	23.58	0.00	24.00	18.45	20.25	
<b>210511_MA01</b>	<RL	2.1	<MDL	<RL	<RL	NA
<b>210511_MA02</b>	<RL	2.17	<MDL	<RL	<RL	NA
<b>210511_MA03</b>	<RL	2.07	<MDL	<RL	<MDL	NA
<b>210511_MA04</b>	<RL	2.1	<MDL	<RL	<RL	NA
<b>210511_MA05</b>	<RL	2.36	<RL	<RL	<RL	NA
<b>210511_MA06</b>	<MDL	2.25	<RL	<RL	<RL	NA
<b>210512_MA01</b>	<RL	2.5	<MDL	<MDL	<MDL	NA
<b>210512_MA02</b>	<RL	2.32	<MDL	<RL	<MDL	NA
<b>210512_MA03</b>	<RL	2.63	<MDL	<RL	<MDL	NA
<b>210512_MA04</b>	<RL	2.63	<MDL	<RL	<MDL	NA
<b>210512_MA05</b>	<MDL	2.12	<RL	<RL	<MDL	NA
<b>210513_MA01</b>	<RL	2.56	<MDL	<RL	<MDL	NA
<b>210513_MA02</b>	<RL	2.34	<MDL	<RL	<MDL	NA
<b>210513_MA03</b>	<RL	3.19	<MDL	<RL	<MDL	NA
<b>210513_MA04</b>	<RL	2.74	<MDL	<RL	<MDL	NA

Table 2: Maximum one-second concentrations and corresponding figure numbers from mobile transects for measured parameters near Graphics Packaging; May 11-13, 2021



Figure 2: Mobile transect (blue path) driven around Graphics Packaging and Water Reclamation Facility



## KALAMAZOO SCOUTING MOBILE MEASUREMENTS: May 11-13, 2021

MOBILE MEASUREMENTS – MAY 11-13, 2021	H <sub>2</sub> S (PPB)	CH <sub>4</sub> (PPM)	BEN (PPB)	TOL (PPB)	XYP (PPB)	FIGURE
ATSDR ACUTE (≤14 DAY) MRL	70	-	9	2000	2000	
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20	-	6	-	600	
ATSDR CHRONIC (≥365 DAYS) MRL	-	-	3	1000	50	
GMAP MDL	7.86	0.00	4.80	3.69	4.05	
GMAP RL	23.58	0.00	24.00	18.45	20.25	
max 1-second concentration						
210511_MA01	<RL	2.05	<RL	<RL	<RL	NA
210511_MA02	<RL	2.05	<MDL	<RL	<MDL	NA
210511_MA03	<RL	2.09	<RL	<RL	<RL	NA
210511_MA04	<RL	2.09	<RL	<RL	<RL	NA
210511_MA05	<RL	2.09	<MDL	<RL	<RL	NA
*210511_MA06	29.3	2.11	<MDL	<RL	<RL	5
210512_MA01	<RL	2.14	<MDL	<RL	<RL	NA
210512_MA02	<RL	2.06	<MDL	<RL	<RL	NA
210512_MA03	<MDL	2.09	<MDL	<RL	<RL	NA

Table 3: Maximum one-second concentrations and corresponding figure numbers from scouting; May 11-13, 2021

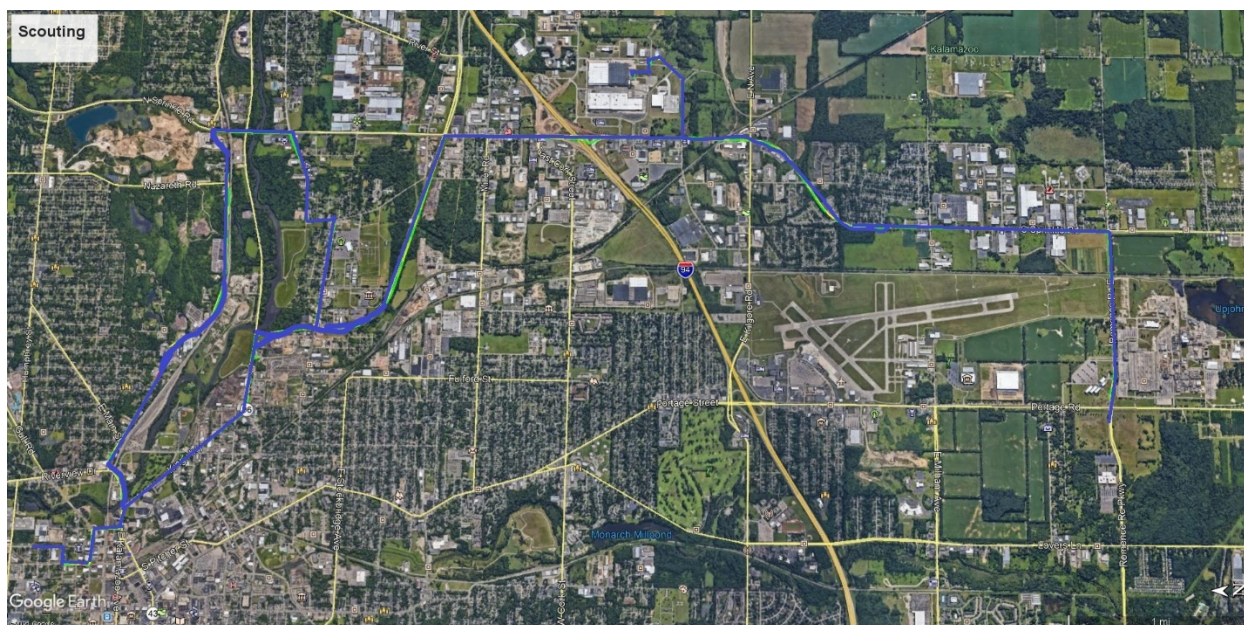


Figure 3: Mobile transect (blue path) driven in Kalamazoo - scouting

ENFORCEMENT CONFIDENTIAL

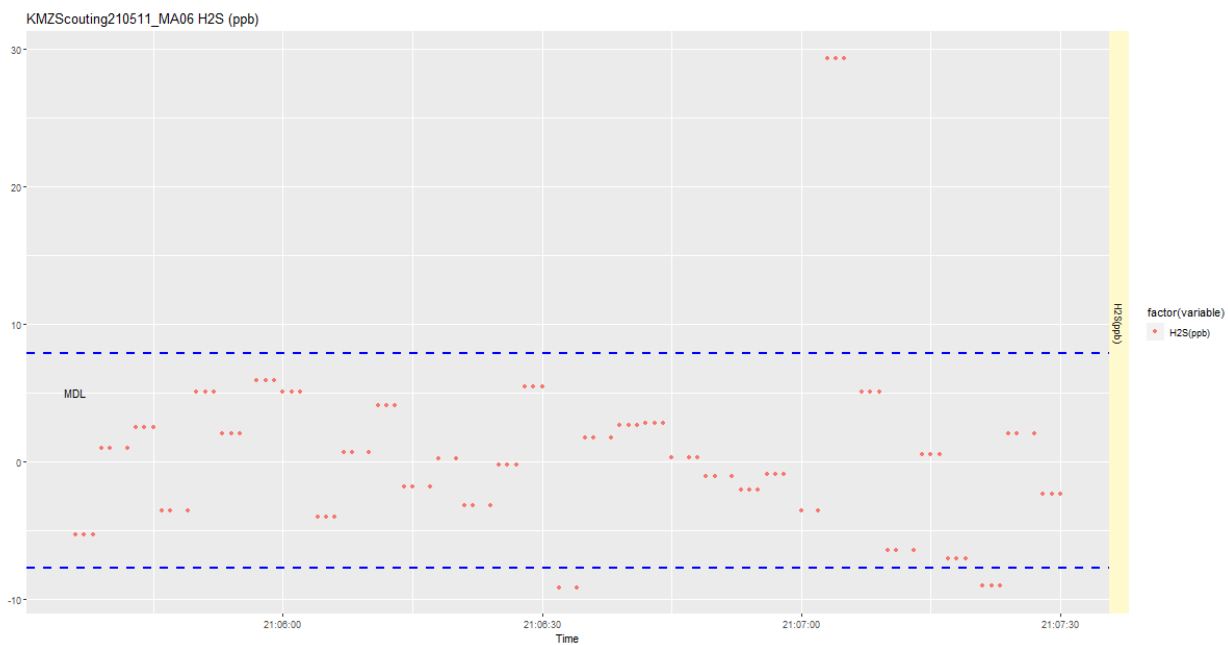


Figure 4:  $H_2S$  time-series 210511\_MA06



Figure 5: Mobile ribbon  $H_2S$  plot 210511\_MA06; S. Sprinkle Rd and Park Circle Dr. (Multiple facilities complex - Kaiser Aluminum)

ENFORCEMENT CONFIDENTIAL

## KALAMAZOO CANISTER LOCATIONS

	CANISTER LOCATIONS MAY 11-13, 2021	DATE (2021) OPENED	TIME (EDT) VALVE OPENED	DATE (2021) CLOSED	TIME (EDT) VALVE CLOSED	LAT/LONG	COMPOSITE/GRAB	NOTES
A:	Verburg Park (1)	05/11	19:59	05/11	20:41	42.3030049, -85.5729319	C	SSE of WWTP
B:	Walbridge Rd (1)	05/11	19:59	05/11	20:37	42.3029585, -85.576814	C	SSE of GP
C:	E. Paterson (1)	05/11	07:53			42.303162, - 85.5745834	G	S GP; observed distinct odor
D:	Verburg Park (2)	05/12	08:55			42.3030049, -85.5729319	G	Entrance to Verburg Park; distinct odor
E:	E Paterson Rd (2)	05/12	19:44			42.3032318, -85.575459	G	S GP; distinct, non-WWTP-like odor
F:	Verburg Park (3)	05/12	19:33	05/13	07:14	42.3030049, -85.5729319	C	SSE WWTP; Strong odor noted
G:	Walbridge Rd (2)	05/12	19:55	05/13	07:06	42.3029585, -85.576814	C	SSE GP; Strong odor noted
H:	Verburg Park (4)	05/12	08:55			42.3030049, -85.5729319	G	Distinct odor noted

Table 4: Location of canister deployment for subsequent TO-15 analysis



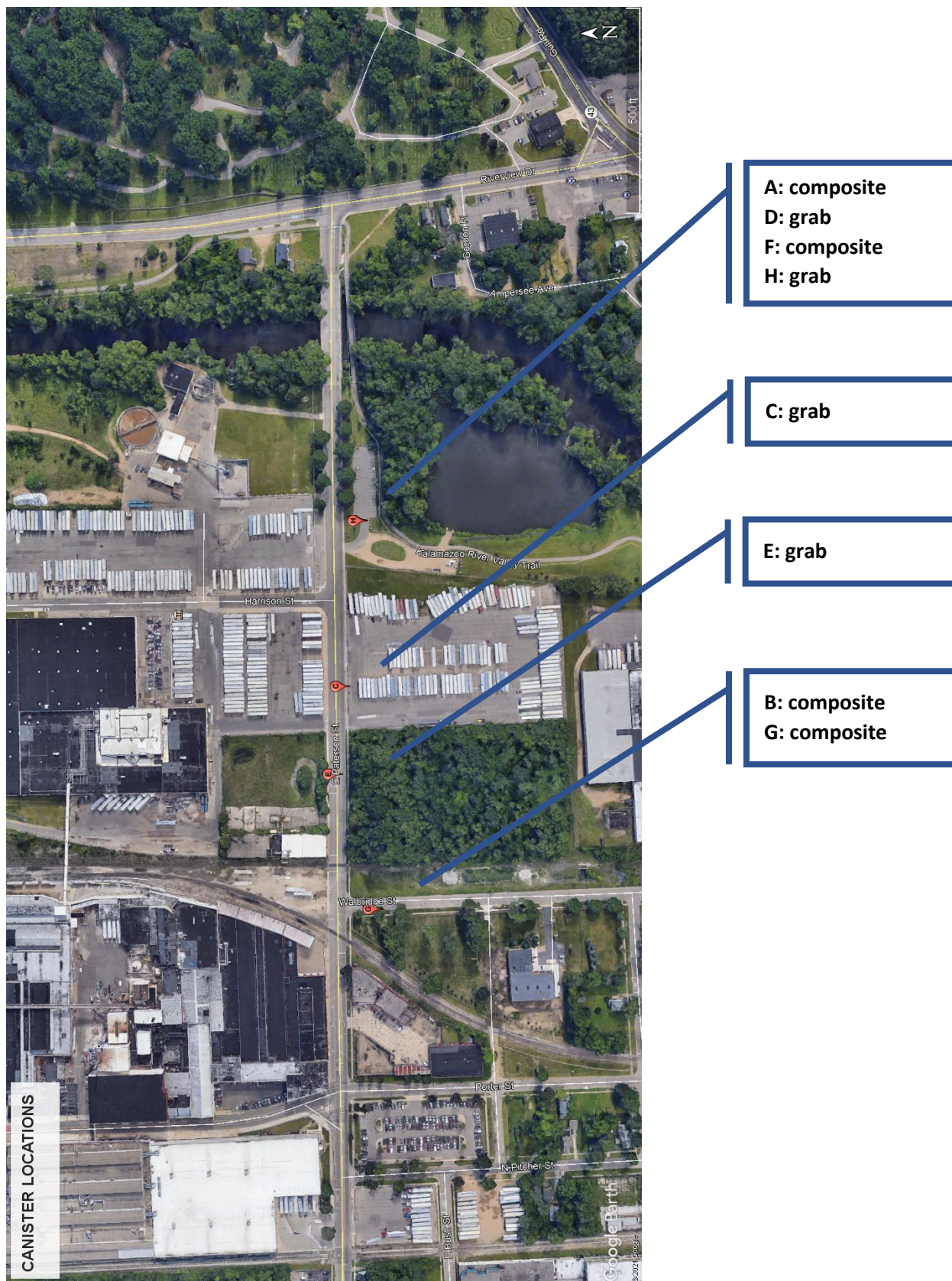


Figure 6: Canister locations

ENFORCEMENT CONFIDENTIAL

## APPENDIX I – FIELD NOTES



## 5/11/2021 - general

Tuesday, May 11, 2021 10:10 AM

### GENERAL

- Arrived in Kalamazoo ~11:30 EDT
- Instruments on and warmed up
- Met with EGLE for canisters
  - 6 canisters & 2 bottles
- Conditions: some clouds, chilly, ~NW winds
- Turned off equipment @ 21:13 EDT

### QC CHECKS

- Started QC checks 12:09 EDT (see GMAP Instrument Log for more information)
- Checks performed at Kalamazoo Fairgrounds
- G2204
  - Direct cylinders and MFC gas dilution
- DV3000
  - Zero reading with ambient air
  - QC check on BEN, TOL, XYP
    - BEN, TOL, XYP, XYM calibrated 4/22 & solved for in DuvasSolve
- All checks passed
- End @ 14:25 EDT

### SAMPLING

- Community
  - Sampled in community immediately W of Graphics Packaging in late afternoon
  - Nothing of note measured
- Scouting
  - Mapped past 4 facilities identified by ECAD late afternoon
    - Textile System Inc
    - Kalamazoo Metal Recyclers
    - Kaiser Aluminum
    - Summit Polymers
  - Mapped same 4 facilities close to dusk (different route)
  - Nothing of note measured

## 5/11/2021 - Graphics Packaging

Tuesday, May 11, 2021 1:43 PM

### GENERAL / SAMPLING

- Mid-afternoon
  - Generally NW winds
  - Mapped perimeter of Graphics Packaging and WWTP
  - Identified potential locations for composite canister samples (12 hr)
  - Smelled strong odor, did not register on instruments
- Evening
  - Generally NW winds
  - Sun is low in the sky, clear skies (little to no clouds)
  - Mapping of perimeter of Graphics and WWTP
- Nothing of note measured. But we did smell odors around facilities

### CANSITERS

- 2 canisters deployed @ along E Paterson Street for composite sample. Detected odors while setting up canisters to sample
  - Location 1: Verburg Park-1
    - 42.3030049, -85.5729319
      - Zip-tied to Kalamazoo River Valley Trail sign at entrance to Verburg Park at chest height
      - South side of E Paterson Road
      - SSE of WWTP
    - Time/Date
      - 5/11/2021 @ 19:49 EDT valve opened
      - Initial pressure: -30 in Hg
      - 5/11/2021 @ 20:41 EDT valve closed
      - Final pressure: -3 in Hg
  - Location 2: Walbridge Road x E Paterson Road (Walbridge Rd-1)
    - 42.3029585, -85.576814
      - Zip-tied to telephone pole 1526 at chest height
      - West side of Walbridge street (approximately 43 m south of E Paterson Street)
      - SSE of Graphics Packaging
    - Time/Date
      - 5/11/2021 @ 19:59 EDT valve opened
      - Initial pressure: -28 in Hg
      - 5/11/2021 @ 20:37 EDT valve closed
      - Final pressure: -3 in Hg
- Regulators not calibrated for 12 hr -- approx. 1 hr reached zero pressure

## 5/12/2021 - general

Wednesday, May 12, 2021 5:59 AM

### GENERAL

- Clear skies
- Started up equipment @ 06:00 EDT
  - DUVAS had to be restarted -- temperature sensor was not reading (999)

### SAMPLING

- Community
  - Sampled at dawn and dusk
  - MA05 community -- runs longer and out of community -- accidentally did not stop mapping when left community
- Scouting
  - Mapped past 4 facilities identified by ECAD (listed on 5/11/21 field notes)
- Did not measure anything of note

## 5/12/2021 - Graphics Packaging

Wednesday, May 12, 2021 6:10 AM

### SAMPLING

- Initial mapping around perimeter ~07:10 EDT
  - Did not see any readings on instruments
- Qualitative observations
  - Detected two distinct odors
  - A distinctly WWTP smell detected directly south of WWTP facility
  - A different (bad) odor detected as you move west from WWTP and directly south and downwind of Graphic Packaging

### CANISTERS

- Grab sample taken with canister 0281
  - E Paterson Rd-1
    - 42.303162, -85.5745834
    - South side of Paterson Rd, directly south of Graphic Packaging facility, along sidewalk, in front of fence to truck lot (D Lot) along the west side of Verburg Park
    - Taken at arm's length away, at/above head height
    - Taken while we could smell the distinct (and non WWTP like) odor
  - Time/Date
    - 5/12/2021
    - 07:53 EDT
    - Did not have sample inlet to check initial/final pressure
      - ◻ Opened valve. Closed valve when hissing sound stopped
- Grab sample taken with bottlevac
  - Verburg Park-2
    - 42.3030049, -85.5729319
    - At Kalamazoo River Valley Trail sign at the entrance to Verburg Park on the south side of E Paterson
    - Taken an arm's length away at breathing height
    - Taken while we could smell distinct odor
  - Time/Date
    - 5/12/2021
    - 08:55 EDT
- Grab sample taken with bottlevac
  - E Paterson Rd-2
    - 42.3032318, -85.575459
    - South side of Paterson Rd, directly south of Graphic Packaging facility, along sidewalk by pole 1527 in front of fence to truck lot (D Lot). west of E Paterson-1
    - Taken at arm's length away, at/above head height
    - Taken while we could smell the distinct (and non WWTP like) odor
  - Time/Date
    - 5/12/2021
    - 19:44 EDT
- 2 canisters deployed along E Paterson Street for composite sample. Detected odors while setting

up canisters to sample: strong odor detected while deploying canisters

- Location 1: Verburg Park-3
  - 42.3030049, -85.5729319
    - Zip-tied & chained and locked to Kalamazoo River Valley Trail sign at entrance to Verburg Park at chest height
    - South side of E Paterson Road
    - SSE of WWTP
  - Time/Date
    - 5/12/2021 @ 19:33 EDT valve opened
    - Initial pressure: -30 in Hg
    - 5/13/2021 @ 07:14 EDT valve closed
    - Final pressure: -4 in Hg
- Location 2: Walbridge Road x E Paterson Road (Walbridge Rd - 2)
  - 42.3029585, -85.576814
    - Zip-tied & chained to telephone pole 1526 at chest height
    - West side of Walbridge street (approximately 43 m south of E Paterson Street)
    - SSE of Graphics Packaging
  - Time/Date
    - 5/12/2021 @ 19:55 EDT valve opened
    - Initial pressure: -29 in Hg
    - 5/13/2021 @ 07:06 EDT valve closed
    - Final pressure: 0 in Hg
- Location 1 had -4 pressure, location 2 had 0 --> location 2 had a leak at the connection between regulator and canister, composite time, unknown.

## 5/13/2021 - general

Thursday, May 13, 2021 5:37 AM

### GENERAL

- Clear skies, general northerly winds
- Sampled in community
  - Did not measure anything of note
- Began PC updates for GMAP and Picarro computers

### QC CHECKS

- Start @ 08:41 EDT
- G2204
  - Completed direct cylinder and MFC dilution checks
    - Passed with no issues
- DV3000
  - Completed direct cylinders (BEN, TOL, XYP)
  - Zero check with ambient air
- All checks passed
- End 11:58 EDT

## 5/13/2021 - Graphics Packaging

Thursday, May 13, 2021 6:04 AM

### SAMPLING

- Perimeter mapping at ~07:30 EDT
- MA03
  - Down entrance road to WWTP detected presence of H<sub>2</sub>S --> low sustained signal (~10 ppb)
  - Typical WWTP odor level
  - Qualitatively -> indicator that distinct odor is not WWTP. The odors are different locations and cross a clear line between distinct odor and detecting H<sub>2</sub>S odor and signal from WWTP

### CANISTERS

- Grab sample taken with canister
  - Verburg Park-4
    - 42.3030049, -85.5729319
    - At Kalamazoo River Valley Trail sign at the entrance to Verburg Park on the south side of E Paterson
    - Taken an arm's length away at breathing height
    - Taken while we could smell distinct odor
  - Time/Date
    - 5/12/2021
    - 08:55 EDT
- Met with Michelle from EGLE to hand off canisters, bottlevac, regulators, and chains/locks (see sharepoint for COC records)

Haile,  
Katherine

Digitally signed by Haile,  
Katherine  
Date: 2021.05.21  
08:00:30 -05'00'

SCOTT  
HAMILTON

Digitally signed by  
SCOTT HAMILTON  
Date: 2021.05.21  
08:47:39 -05'00'

## APPENDIX II - QC CHECKS



27

5/11/2021 S. Hamilton  
K. Hails

Kalamazoo, MI  
12:09 EDT

Time check : Phone 13:15 GMAP 13:15 Picarro 13:15

G2204 QC Check / DV300 QC Check

Dilution System: ENV 6100 / 3485 / cert date 4/14/21

Cylinders:

	SN	conc.	cert date	psi
H <sub>2</sub> S	FF19845	50.69 ppm	4/6/2020	1200
CH <sub>4</sub>	63DIAL	200.0 ppm	7/29/2019	1700
BTEX	D522199	100 / 101 / 99	8/20/2018	850

B / T / xyp

TIME	Pollutant	Std(ppm)	Reading(ppm)	% Diff
12:41	H <sub>2</sub> S	Z	-0.0008	N/A
12:41	CH <sub>4</sub>	Z	0.002	N/A
12:59	H <sub>2</sub> S	2.001	2.102	5.0%
13:07	H <sub>2</sub> S	1.000	1.042	4.2%
13:15	H <sub>2</sub> S	0.500	0.520	4.0%
13:22	H <sub>2</sub> S	0.249	0.255	2.4%
13:31	CH <sub>4</sub>	6.00	6.079	1.3%
13:38	CH <sub>4</sub>	4.00	4.047	1.2%
13:42	CH <sub>4</sub>	3.00	3.025	0.8%
13:46	CH <sub>4</sub>	2.00	2.016	0.8%
13:53	H <sub>2</sub> S	50.69	50.708	0%
14:00	CH <sub>4</sub>	200.0	211	5.5%
14:07	H <sub>2</sub> S	Z	0.0013	N/A
14:07	CH <sub>4</sub>	Z	0.023	N/A

5/11/2021 (cont)

DV3000 QC check

TIME	Pollutant	std (ppb)	reading (ppb)	% Diff
			-2	N/A
14:11	B	Z	4	N/A
14:11	T	Z	4	N/A
14:11	Xyp	Z	87	N/A
14:19	B	100	99	13.0%
14:19	T	101	97	2.0%
14:19	Xyp	99	97	2.0%
14:25	B	Z	-6	N/A
14:25	T	Z	2	N/A
14:25	Xyp	Z	2	N/A

END 14:25 EDT



28

5/13/2021 S Hamilton  
K. Hails

Kalamazoo, MI  
08:41 EDT

29

28

Time Check: Phone GMAP Picarro  
10:54 10:54 10:54

Dilution System: ENV 6100 / SN 3485 / cert. date 4/14/21

Cylinders	SN	conc.	cert. date	psi
H <sub>2</sub> S	FF19845	50.69 ppm	4/6/2020	1200
CH <sub>4</sub>	63D1AL	200.0 ppm	7/29/2019	1500
BTEX	D522199	100/101/99	8/20/2018	800

(B/T/xyp)

G2204 GC Check / DV3000 QC Check

TIME	Pollutant	Std(ppm)	Rdg(ppm)	% Diff
09:25	H <sub>2</sub> S	Z	-0.001	N/A
09:25	CH <sub>4</sub>	Z	0.005	N/A
09:37	H <sub>2</sub> S	1.999 <sup>SN</sup> <del>2.40</del> 5/13/21	2.116	5.9%
09:46	H <sub>2</sub> S	1.000	1.055	5.5%
09:54	H <sub>2</sub> S	0.499	0.526	5.4%
10:04	H <sub>2</sub> S	0.250	0.263	5.2%
10:20	H <sub>2</sub> S	0.070	0.074	5.7%
gas flow below cert of MFC. Rerun pt @ 5000 Total flow				
10:38	H <sub>2</sub> S	0.069 <sup>SN</sup> <del>0.069</del> 5/13/21	0.072	4.3%
10:52	CH <sub>4</sub>	6.000	6.102	1.7%
11:01	CH <sub>4</sub>	4.00	4.072	1.8%
11:12	CH <sub>4</sub>	3.00	3.054	1.8%
11:19	CH <sub>4</sub>	2.00	2.042	2.1%
11:29	H <sub>2</sub> S	50.69	50.720	0.1%
11:35	CH <sub>4</sub>	200.0	208.4	4.2%

5/13/2021 (cont)

30

TIME	Pollutant	std	rdg	% Diff
11:41	H <sub>2</sub> S	Z	0.004	N/A
11:41	CH <sub>4</sub>	Z	0.023	N/A
11:39	B	Z	1	N/A
11:39	T	Z	9	N/A
11:39	Xyp	Z	6	N/A
11:47	B	100	92	8.0%
11:47	T	101	97	4.0%
11:47	Xyp	99	91	8.0%
11:53	B	Z	5	N/A
11:53	T	Z	13	N/A
11:53	Xyp	Z	1	N/A

- Conducting Windows 10 updates on Picarro and GMAP Computers.

END 11:58



## APPENDIX III – CANISTER REPORT



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

18 June 2021

Work Order: 2105121

Price: \$3,300.00

REX LANE  
EGLE-AQD-KALAMAZOO  
7953 Adobe Road  
Kalamazoo, MI 49009  
RE: KALAMAZOO GPI

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane  
Laboratory Director



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

EGLE-AQD-KALAMAZOO  
7953 Adobe Road  
Kalamazoo MI, 49009

Project: KALAMAZOO GPI  
Site Code: LB042186  
Project Manager: REX LANE

**Reported:**  
06/18/2021

**Analytical Report for Samples**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
E Paterson Rd-1	2105121-01	Air	05/12/2021	05/13/2021	
Verburg Park-2	2105121-02	Air	05/12/2021	05/13/2021	
E Paterson Rd-2	2105121-03	Air	05/12/2021	05/13/2021	
Verburg park-4	2105121-04	Air	05/13/2021	05/13/2021	
Verburg Park-1	2105121-05	Air	05/11/2021	05/13/2021	
Walbridge St-1	2105121-06	Air	05/11/2021	05/13/2021	
Verburg Park-3	2105121-07	Air	05/12/2021	05/13/2021	
Walbridge St-2	2105121-08	Air	05/12/2021	05/13/2021	

**Notes and Definitions**

- X1 Method TO-15 is used for the analysis of volatile organic compounds in air. Naphthalene and 2-Methylnaphthalene are semi volatile compounds and results should be considered estimated.
- T Reported value is less than the reporting limit (RL). Result is estimated.
- ND Indicates compound analyzed for but not detected at or above the reporting limit (RL).
- RL Reporting Limit
- NA Not Applicable



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

Client ID: E Paterson Rd-1

Lab ID: 2105121-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/10/21	B1F1118	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/10/21	B1F1118	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/10/21	B1F1118	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
540-84-1	<b>2,2,4-Trimethylpentane</b>	<b>1.9</b>	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
78-93-3	<b>2-Butanone (MEK)</b>	<b>1.3</b>	14	ug/m3	1	06/10/21	B1F1118	TO-15	T
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
71-43-2	<b>Benzene</b>	<b>0.49</b>	0.94	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/10/21	B1F1118	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
56-23-5	Carbon tetrachloride	ND	1.9	ug/m3	1	06/10/21	B1F1118	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
75-00-3	Chloroethane	ND	0.78	ug/m3	1	06/10/21	B1F1118	TO-15	
67-66-3	Chloroform	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
74-87-3	<b>Chloromethane</b>	<b>0.69</b>	0.61	ug/m3	1	06/10/21	B1F1118	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/10/21	B1F1118	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.3</b>	1.5	ug/m3	1	06/10/21	B1F1118	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
110-54-3	Hexane	ND	3.5	ug/m3	1	06/10/21	B1F1118	TO-15	
1330-20-7	<b>m &amp; p - Xylene</b>	<b>1.2</b>	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/10/21	B1F1118	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
100-42-5	Styrene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	

Lab Work Order # 2105121

Page 3 of 21

**ENFORCEMENT CONFIDENTIAL**





**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: E Paterson Rd-1**

**Lab ID: 2105121-01**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
108-88-3	<b>Toluene</b>	<b>2.4</b>	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-69-4	<b>Trichlorofluoromethane</b>	<b>1.1</b>	1.7	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/10/21	B1F1118	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg Park-2**

**Lab ID: 2105121-02**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/12/21	B1F1408	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
87-61-6	1,2,3-Trichlorobenzene	ND	7.3	ug/m3	1	06/12/21	B1F1408	TO-15	
96-18-4	1,2,3-Trichloropropane	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
526-73-8	1,2,3-Trimethylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/12/21	B1F1408	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/12/21	B1F1408	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/12/21	B1F1408	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
540-84-1	2,2,4-Trimethylpentane	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
78-93-3	2-Butanone (MEK)	ND	14	ug/m3	1	06/12/21	B1F1408	TO-15	
91-57-6	2-Methylnaphthalene	ND	28	ug/m3	1	06/12/21	B1F1408	TO-15	X1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/12/21	B1F1408	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/12/21	B1F1408	TO-15	
71-43-2	Benzene	ND	0.94	ug/m3	1	06/12/21	B1F1408	TO-15	
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/12/21	B1F1408	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/12/21	B1F1408	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/12/21	B1F1408	TO-15	
56-23-5	Carbon tetrachloride	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
75-00-3	Chloroethane	ND	0.77	ug/m3	1	06/12/21	B1F1408	TO-15	
67-66-3	Chloroform	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
74-87-3	<b>Chloromethane</b>	<b>0.64</b>	0.61	ug/m3	1	06/12/21	B1F1408	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
110-82-7	Cyclohexane	ND	1.0	ug/m3	1	06/12/21	B1F1408	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/12/21	B1F1408	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.3</b>	1.5	ug/m3	1	06/12/21	B1F1408	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
110-54-3	Hexane	ND	3.4	ug/m3	1	06/12/21	B1F1408	TO-15	

Lab Work Order # 2105121

Page 5 of 21

**ENFORCEMENT CONFIDENTIAL**



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg Park-2**

**Lab ID: 2105121-02**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
98-82-8	Isopropylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
1330-20-7	m & p - Xylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/12/21	B1F1408	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
91-20-3	Naphthalene	ND	26	ug/m3	1	06/12/21	B1F1408	TO-15	X1
104-51-8	n-Butylbenzene	ND	5.4	ug/m3	1	06/12/21	B1F1408	TO-15	
103-65-1	n-Propylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
135-98-8	sec-Butylbenzene	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
100-42-5	Styrene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/12/21	B1F1408	TO-15	
108-88-3	Toluene	ND	1.1	ug/m3	1	06/12/21	B1F1408	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
75-69-4	Trichlorofluoromethane	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/12/21	B1F1408	TO-15	
<i>Surrogate: Bromofluorobenzene</i>			99.2 %		70-130	06/12/21	B1F1408	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

Client ID: E Paterson Rd-2

Lab ID: 2105121-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/12/21	B1F1408	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
87-61-6	1,2,3-Trichlorobenzene	ND	7.3	ug/m3	1	06/12/21	B1F1408	TO-15	
96-18-4	1,2,3-Trichloropropane	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
526-73-8	1,2,3-Trimethylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/12/21	B1F1408	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/12/21	B1F1408	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/12/21	B1F1408	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
540-84-1	2,2,4-Trimethylpentane	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
78-93-3	2-Butanone (MEK)	ND	14	ug/m3	1	06/12/21	B1F1408	TO-15	
91-57-6	2-Methylnaphthalene	ND	28	ug/m3	1	06/12/21	B1F1408	TO-15	X1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/12/21	B1F1408	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/12/21	B1F1408	TO-15	
71-43-2	Benzene	ND	0.94	ug/m3	1	06/12/21	B1F1408	TO-15	
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/12/21	B1F1408	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/12/21	B1F1408	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/12/21	B1F1408	TO-15	
56-23-5	Carbon tetrachloride	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
75-00-3	Chloroethane	ND	0.77	ug/m3	1	06/12/21	B1F1408	TO-15	
67-66-3	Chloroform	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
74-87-3	<b>Chloromethane</b>	<b>0.58</b>	0.61	ug/m3	1	06/12/21	B1F1408	TO-15	T
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
110-82-7	Cyclohexane	ND	1.0	ug/m3	1	06/12/21	B1F1408	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/12/21	B1F1408	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.3</b>	1.5	ug/m3	1	06/12/21	B1F1408	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
110-54-3	Hexane	ND	3.4	ug/m3	1	06/12/21	B1F1408	TO-15	

Lab Work Order # 2105121

Page 7 of 21

**ENFORCEMENT CONFIDENTIAL**



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: E Paterson Rd-2**

**Lab ID: 2105121-03**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
98-82-8	Isopropylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
1330-20-7	m & p - Xylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/12/21	B1F1408	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/12/21	B1F1408	TO-15	
91-20-3	Naphthalene	ND	26	ug/m3	1	06/12/21	B1F1408	TO-15	X1
104-51-8	n-Butylbenzene	ND	5.4	ug/m3	1	06/12/21	B1F1408	TO-15	
103-65-1	n-Propylbenzene	ND	1.4	ug/m3	1	06/12/21	B1F1408	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
135-98-8	sec-Butylbenzene	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
100-42-5	Styrene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/12/21	B1F1408	TO-15	
108-88-3	Toluene	ND	1.1	ug/m3	1	06/12/21	B1F1408	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/12/21	B1F1408	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/12/21	B1F1408	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
75-69-4	Trichlorofluoromethane	ND	1.6	ug/m3	1	06/12/21	B1F1408	TO-15	
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/12/21	B1F1408	TO-15	
<i>Surrogate: Bromofluorobenzene</i>			97.8 %		70-130	06/12/21	B1F1408	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg park-4**

**Lab ID: 2105121-04**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/10/21	B1F1118	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/10/21	B1F1118	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/10/21	B1F1118	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
540-84-1	<b>2,2,4-Trimethylpentane</b>	<b>0.86</b>	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	T
78-93-3	<b>2-Butanone (MEK)</b>	<b>1.5</b>	14	ug/m3	1	06/10/21	B1F1118	TO-15	T
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
71-43-2	<b>Benzene</b>	<b>0.77</b>	0.94	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/10/21	B1F1118	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
56-23-5	Carbon tetrachloride	ND	1.9	ug/m3	1	06/10/21	B1F1118	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
75-00-3	Chloroethane	ND	0.78	ug/m3	1	06/10/21	B1F1118	TO-15	
67-66-3	<b>Chloroform</b>	<b>0.80</b>	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	T
74-87-3	<b>Chloromethane</b>	<b>0.79</b>	0.61	ug/m3	1	06/10/21	B1F1118	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/10/21	B1F1118	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.3</b>	1.5	ug/m3	1	06/10/21	B1F1118	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
110-54-3	Hexane	ND	3.5	ug/m3	1	06/10/21	B1F1118	TO-15	
1330-20-7	<b>m &amp; p - Xylene</b>	<b>1.2</b>	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/10/21	B1F1118	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
100-42-5	Styrene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	

Lab Work Order # 2105121

Page 9 of 21

**ENFORCEMENT CONFIDENTIAL**



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg park-4**

**Lab ID: 2105121-04**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
108-88-3	<b>Toluene</b>	<b>2.2</b>	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-69-4	<b>Trichlorofluoromethane</b>	<b>1.1</b>	1.7	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/10/21	B1F1118	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg Park-1**

**Lab ID: 2105121-05**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/10/21	B1F1118	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/10/21	B1F1118	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/10/21	B1F1118	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
540-84-1	2,2,4-Trimethylpentane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
78-93-3	2-Butanone (MEK)	ND	14	ug/m3	1	06/10/21	B1F1118	TO-15	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
71-43-2	Benzene	ND	0.94	ug/m3	1	06/10/21	B1F1118	TO-15	
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/10/21	B1F1118	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
56-23-5	Carbon tetrachloride	ND	1.9	ug/m3	1	06/10/21	B1F1118	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
75-00-3	Chloroethane	ND	0.78	ug/m3	1	06/10/21	B1F1118	TO-15	
67-66-3	Chloroform	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
74-87-3	<b>Chloromethane</b>	<b>0.93</b>	0.61	ug/m3	1	06/10/21	B1F1118	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/10/21	B1F1118	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.2</b>	1.5	ug/m3	1	06/10/21	B1F1118	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
110-54-3	Hexane	ND	3.5	ug/m3	1	06/10/21	B1F1118	TO-15	
1330-20-7	m & p - Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/10/21	B1F1118	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
100-42-5	Styrene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	

Lab Work Order # 2105121

Page 11 of 21

**ENFORCEMENT CONFIDENTIAL**





MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

Client ID: Verburg Park-1

Lab ID: 2105121-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
108-88-3	<b>Toluene</b>	<b>0.71</b>	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	T
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-69-4	<b>Trichlorofluoromethane</b>	<b>1.1</b>	1.7	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/10/21	B1F1118	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Walbridge St-1**

**Lab ID: 2105121-06**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/10/21	B1F1118	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/10/21	B1F1118	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/10/21	B1F1118	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
540-84-1	2,2,4-Trimethylpentane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
78-93-3	2-Butanone (MEK)	ND	14	ug/m3	1	06/10/21	B1F1118	TO-15	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
71-43-2	Benzene	ND	0.94	ug/m3	1	06/10/21	B1F1118	TO-15	
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/10/21	B1F1118	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
56-23-5	Carbon tetrachloride	ND	1.9	ug/m3	1	06/10/21	B1F1118	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
75-00-3	Chloroethane	ND	0.78	ug/m3	1	06/10/21	B1F1118	TO-15	
67-66-3	Chloroform	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
74-87-3	<b>Chloromethane</b>	<b>0.67</b>	0.61	ug/m3	1	06/10/21	B1F1118	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/10/21	B1F1118	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.2</b>	1.5	ug/m3	1	06/10/21	B1F1118	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
110-54-3	Hexane	ND	3.5	ug/m3	1	06/10/21	B1F1118	TO-15	
1330-20-7	m & p - Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/10/21	B1F1118	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
100-42-5	Styrene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	

Lab Work Order # 2105121

Page 13 of 21

**ENFORCEMENT CONFIDENTIAL**



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Walbridge St-1**

**Lab ID: 2105121-06**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
108-88-3	Toluene	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-69-4	<b>Trichlorofluoromethane</b>	<b>1.1</b>	1.7	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/10/21	B1F1118	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg Park-3**

**Lab ID: 2105121-07**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/10/21	B1F1118	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/10/21	B1F1118	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/10/21	B1F1118	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
540-84-1	2,2,4-Trimethylpentane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
78-93-3	<b>2-Butanone (MEK)</b>	<b>1.3</b>	14	ug/m3	1	06/10/21	B1F1118	TO-15	T
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
71-43-2	Benzene	ND	0.94	ug/m3	1	06/10/21	B1F1118	TO-15	
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/10/21	B1F1118	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
56-23-5	Carbon tetrachloride	ND	1.9	ug/m3	1	06/10/21	B1F1118	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
75-00-3	Chloroethane	ND	0.78	ug/m3	1	06/10/21	B1F1118	TO-15	
67-66-3	<b>Chloroform</b>	<b>0.85</b>	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	T
74-87-3	<b>Chloromethane</b>	<b>0.96</b>	0.61	ug/m3	1	06/10/21	B1F1118	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/10/21	B1F1118	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.2</b>	1.5	ug/m3	1	06/10/21	B1F1118	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
110-54-3	Hexane	ND	3.5	ug/m3	1	06/10/21	B1F1118	TO-15	
1330-20-7	m & p - Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/10/21	B1F1118	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
100-42-5	Styrene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	

Lab Work Order # 2105121

Page 15 of 21

**ENFORCEMENT CONFIDENTIAL**



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Verburg Park-3**

**Lab ID: 2105121-07**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
108-88-3	<b>Toluene</b>	<b>1.1</b>	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-69-4	<b>Trichlorofluoromethane</b>	<b>1.1</b>	1.7	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/10/21	B1F1118	TO-15	



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Walbridge St-2**

**Lab ID: 2105121-08**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
79-00-5	1,1,2-Trichloroethane	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-34-3	1,1-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
75-35-4	1,1-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	ug/m3	1	06/10/21	B1F1118	TO-15	
95-63-6	1,2,4-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/m3	1	06/10/21	B1F1118	TO-15	
95-50-1	1,2-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
107-06-2	1,2-Dichloroethane	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
78-87-5	1,2-Dichloropropane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
108-67-8	1,3,5-Trimethylbenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
106-99-0	1,3-Butadiene	ND	0.65	ug/m3	1	06/10/21	B1F1118	TO-15	
541-73-1	1,3-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
106-46-7	1,4-Dichlorobenzene	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
540-84-1	2,2,4-Trimethylpentane	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
78-93-3	2-Butanone (MEK)	ND	14	ug/m3	1	06/10/21	B1F1118	TO-15	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-05-8	Acetonitrile	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
107-13-1	Acrylonitrile	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
71-43-2	Benzene	ND	0.94	ug/m3	1	06/10/21	B1F1118	TO-15	
75-27-4	Bromodichloromethane	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
75-25-2	Bromoform	ND	3.0	ug/m3	1	06/10/21	B1F1118	TO-15	
74-83-9	Bromomethane	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
56-23-5	Carbon tetrachloride	ND	1.9	ug/m3	1	06/10/21	B1F1118	TO-15	
108-90-7	Chlorobenzene	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
75-00-3	Chloroethane	ND	0.78	ug/m3	1	06/10/21	B1F1118	TO-15	
67-66-3	Chloroform	ND	1.4	ug/m3	1	06/10/21	B1F1118	TO-15	
74-87-3	<b>Chloromethane</b>	<b>0.74</b>	0.61	ug/m3	1	06/10/21	B1F1118	TO-15	
156-59-2	cis-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
124-48-1	Dibromochloromethane	ND	2.5	ug/m3	1	06/10/21	B1F1118	TO-15	
75-71-8	<b>Dichlorodifluoromethane</b>	<b>2.2</b>	1.5	ug/m3	1	06/10/21	B1F1118	TO-15	
100-41-4	Ethylbenzene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
110-54-3	Hexane	ND	3.5	ug/m3	1	06/10/21	B1F1118	TO-15	
1330-20-7	m & p - Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
75-09-2	Methylene chloride	ND	1.0	ug/m3	1	06/10/21	B1F1118	TO-15	
1634-04-4	Methyltertiarybutylether	ND	1.8	ug/m3	1	06/10/21	B1F1118	TO-15	
95-47-6	o-Xylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
100-42-5	Styrene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	

Lab Work Order # 2105121

Page 17 of 21

**ENFORCEMENT CONFIDENTIAL**



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

**Client ID: Walbridge St-2**

**Lab ID: 2105121-08**

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Volatiles</b>									
127-18-4	Tetrachloroethylene	ND	2.0	ug/m3	1	06/10/21	B1F1118	TO-15	
108-88-3	Toluene	ND	1.1	ug/m3	1	06/10/21	B1F1118	TO-15	
156-60-5	trans-1,2-Dichloroethylene	ND	1.2	ug/m3	1	06/10/21	B1F1118	TO-15	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.3	ug/m3	1	06/10/21	B1F1118	TO-15	
79-01-6	Trichloroethylene	ND	1.6	ug/m3	1	06/10/21	B1F1118	TO-15	
75-69-4	<b>Trichlorofluoromethane</b>	<b>1.1</b>	1.7	ug/m3	1	06/10/21	B1F1118	TO-15	T
75-01-4	Vinyl chloride	ND	0.75	ug/m3	1	06/10/21	B1F1118	TO-15	





Department of Environment, Great Lakes, and Energy  
Laboratory Services Section

### Analysis Request Sheet

Lab Work Order Number <b>210521</b>		Project Name <b>Kalamazoo GPI</b>		Matrix <b>AIR</b>	
Location ID <b>City of Kalamazoo</b>		Program <b>AQD</b>		CC Email 1 <b>LaneR@michigan.gov</b>	
Dept. Division District <b>AQD - Kalamazoo</b>		Activity <b>Air105</b>		Project TAT Days <b>NA</b>	
State Project Manager <b>Rex Lane</b>		Funding Source <b>077</b>		Sample Collector <b>Lane / EPA</b>	
State Project Manager Email <b>LaneR@michigan.gov</b>		Location Code <b>077</b>		Sample Collector Phone <b>269-312-1540</b>	
State Project Manager Phone <b>269-312-1540</b>		SUD Location Code <b>077</b>		Contract Firm <b>NA</b>	
		Overflow Lab Choice 1 <b>Y</b>		Contract Firm Primary Contact <b>NA</b>	
		Overflow Lab Choice 2 <b>NA</b>		Primary Contact Phone <b>NA</b>	

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments	Regulator ID	Canister/Bottle Vial Number
1	01 E Paterson Rd - 1	5/12/2021	07:53		canister	grab	0281
2							
3	02 Verburg Park - 2	5/12/2021	08:55		bottlevac	grab	1210
4							
5	03 E Paterson Rd - 2	5/12/2021	19:44		bottlevac	grab	1006
6							
7	04 Verburg Park - 4	5/13/2021	07:16		canister	grab	03615
8							
9							
10							

ORGANIC CHEMISTRY			
VOA - Volatile Organic Analysis Bottlevac 1 2 3 4 5 6 7 8 9 10 Canister - AQD 1 2 3 4 5 6 7 8 9 10 Canister - RRD 1 2 3 4 5 6 7 8 9 10 Tender - Volatiles 1 2 3 4 5 6 7 8 9 10 METH - Methane, Ethane, Ethene Methane, Ethane, Ethene 1 2 3 4 5 6 7 8 9 10		E Paterson Rd - 1 42.303162 -85.5745834 S side of Paterson Rd on side walk, directly in front of fence to truck lot	
Verburg Park 42.3030049 -85.5729319 at Kalamazoo River valley trail sign at entrance to Verburg Park (same location as canister 03605)			
E Paterson Rd - 2 42.3032318 -85.575459 S side of Paterson on side walk by pole 152 ft outside lot D			

Chain of Custody	Relinquished by	Received by	Date / Time
	Print Name & Org. <b>Katherine Hale EPA-R5</b>	<b>Michelle Zojne</b>	<b>5/13/2021 09:49 EDT</b>
	Signature: <i>Katherine Hale</i>	<i>Michelle Zojne</i>	
	Print Name & Org. <b>Katherine Hale</b>	<b>Melissa Smith</b>	<b>5/13/21 1305</b>
	Signature: <i>Melissa Smith</i>		
	Print Name & Org.		
	Signature:		



Department of Environment, Great Lakes, and Energy  
Laboratory Services Section

### Analysis Request Sheet

Lab Work Order Number <b>2105121</b>	Project Name <b>Kalamazoo GPI</b>	Matrix <b>AIR</b>
Location ID <b>City of Kalamazoo</b>	Program <b>AQD</b>	CC Email 1 <b>LaneR@michigan.gov</b>
Project TAT Days	Sample Collector <b>Lane / EPA</b>	CC Email 2 <b>Kilmers@michigan.gov</b>
Dept Division-District <b>AQD - Kalamazoo</b>	Activity	Project Due Date
Funding Source <b>Air105</b>	CC Email 3	Sample Collector Phone <b>269-312-1540</b>
State Project Manager <b>Rex Lane</b>	Location Code <b>077</b>	Contract Firm <b>NA</b>
State Project Manager Email <b>LaneR@michigan.gov</b>	Overflow Lab Choice 1	Contract Firm Primary Contact <b>NA</b>
State Project Manager Phone <b>269-312-1540</b>	Overflow Lab Choice 2	Primary Contact Phone <b>NA</b>
Accept Analysts hold these codes <b>Y</b>		

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments	Regulator ID	Canister/Bottle Vial Number
1	VERBURG PARK - 1	5/11/2021	14:49		initial pressure: -30 inHg final pressure: -3 in Hg valve closed @ 20:37 EDT on 5/11/21	EGLE734	03605
2							
3							
4							
5							
6	Walbridge St - 1	5/11/2021	19:59		initial pressure: -28 inHg final pressure: -3 in Hg valve closed @ 20:37 EDT on 5/11/21	EGLE737	03605
7							
8							
9							
10							

<b>ORGANIC CHEMISTRY</b> VOA - Volatile Organic Analysis Bottleloc 1 2 3 4 5 6 7 8 9 10 Canister - AQD 1 2 3 4 5 6 7 8 9 10 Canister - RRD 1 2 3 4 5 6 7 8 9 10 TGA - Volatiles 1 2 3 4 5 6 7 8 9 10 METN - Methane, Ethane, Ethene 1 2 3 4 5 6 7 8 9 10 TO-15 list and sulfur compounds	<b>Location</b> VERBURG PARK  Walbridge St	<b>GPS coordinates</b> 42.3030049 -85.5729319  42.3029585 -85.570814	<b>Site description</b> ZIP - 49001 to Kalamazoo River trail sign @ entrance to Verburg Park  ZIPed to telephone pole 1526 on W side of Walbridge St., south of E Puterson St
---	---	---	---

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org. Katherine Haile EPA R5	Michelle Zapp	5/13/2021
	Signature: <i>Katherine Haile</i>	<i>Michelle Zapp</i>	09:49 EDT
	Print Name & Org. Melissa J. Smith		5/13/21 1205
	Signature: <i>Melissa J. Smith</i>		
	Print Name & Org.		
	Signature:		

**EGLE**Department of Environment, Great Lakes, and Energy  
Laboratory Services Section**Analysis Request Sheet**

Lab Work Order Number <b>2105121</b>	Project Name <b>Kalamazoo GPI</b>	Matrix <b>AIR</b>
Location ID <b>City of Kalamazoo</b>	Program <b>AQD</b>	CC Email 1 <b>LaneR@michigan.gov</b>
Dept Division/District <b>AQD - Kalamazoo</b>	Activity <b>Air105</b>	CC Email 2 <b>Kilmers@michigan.gov</b>
State Project Manager <b>Rex Lane</b>	Funding Source <b>077</b>	CC Email 3
State Project Manager Email <b>LaneR@michigan.gov</b>	Location Code <b>077</b>	Overflow Lab Choice 1
State Project Manager Phone <b>269-312-1540</b>	SUD Location Code	Overflow Lab Choice 2
		Project TAT Days
		Project Due Date
		Sample Collector <b>Lane / EPA</b>
		Sample Collector Phone <b>269-312-1540</b>
		Contract Firm <b>NA</b>
		Contract Firm Primary Contact <b>NA</b>
		Primary Contact Phone <b>NA</b>
		Accept Analyte hold time codes <b>Y</b>

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments	Regulator ID	Canister/Bottle Volume Number
1	07 Verburg Park - 3	5/12/2021	19:33		P <sub>1</sub> : -30 in Hg P <sub>2</sub> : -4 in Hg Valve closed @ 07:14 on 5/13/2021	05740	0290
2							
3							
4							
5							
6	08 Walbridge St - 2	5/12/2021	19:55		P <sub>1</sub> : -29 in Hg P <sub>2</sub> : 0 in Hg Valve closed @ 07:00 on 5/13/2021	05741	03602
7							
8							
9							
10							

ORGANIC CHEMISTRY	Location	GPS	Description
VOA - Volatile Organic Analysis Bottle Vac 1 2 3 4 5 6 7 8 9 10 Canister - AQD 1 2 3 4 5 6 7 8 9 10 Canister - RHD 1 2 3 4 5 6 7 8 9 10 Tender - Volatiles 1 2 3 4 5 6 7 8 9 10 TO-15 list and sulfur compounds MEH - Methane, Ethane, Ethene 1 2 3 4 5 6 7 8 9 10	Verburg Park	42.3030049 -85.5729319	Chained to Kalamazoo River valley trail sign @ entrance to Verburg Park
	Walbridge St	42.3029585 -85.570874	Chained to telephone pole 15216 on W side of Walbridge St, S of E Interceptor

Relinquished by	Received By	Date / Time
Print Name & Org. Signature: <b>KATHARINE HAILE EPA-R5</b>	Print Name & Org. Signature: <b>Michelle Zepke</b>	5/13/2021 09:49 EDT
Print Name & Org. Signature: <b>KATHARINE HAILE</b>	Print Name & Org. Signature: <b>Melissa J. H.</b>	5/13/21
Print Name & Org. Signature:		