Appendix F
Vapor Intrusion Screening Investigation Memo and Supporting Documentation

Memorandum

Environmental Resources Management

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To: Kimberly Tyson
Michigan Department of Environmental Quality (MDEQ)

From: Martin Ryan and Thomas O'Connell
Environmental Resources Management (ERM)

Date: April 27, 2018

Subject: Vapor Intrusion Screening Assessment Initial Report
18075 Krause Street, Riverview, Michigan

At the request of General Electric Company (GE), ERM has prepared this vapor intrusion (VI) screening assessment initial report for GE's former Electrical Apparatus Service Center located at 18075 Krause Street, Riverview, Michigan. This work was completed in accordance with ERM's work plan to MDEQ dated October 12, 2017 (revised November 30, 2017) and approved by MDEQ in a letter dated December 26, 2017.

The purpose of the investigation was to determine if soil vapor and/or groundwater presents a risk to off-site receptors. The potential risk and related risk mitigation measures relative to on-site receptors is already addressed in the Corrective Measures Implementation (CMI) Report previously reviewed by MDEQ. This VI Screening Assessment Initial Report provides MDEQ with a timely summary of the VI screening assessment conducted to date. Following agreement that the data collection to assess the VI pathway is complete, full documentation of the screening assessment (boring logs, field documentation, analytical reports, etc.) will be included in the forthcoming revised CMI report.

WORK COMPLETED

The VI screening assessment was completed in two phases: January 2018 and March 2018. During a telephone conference on March 9, 2018, ERM and GE provided MDEQ with a summary of the January 2018 results, prior to proceeding with the March 2018 sampling phase. The March 2018 investigation results were discussed with MDEQ on a telephone conference on April 16, 2018 during which MDEQ requested this summary report. Details for each phase are presented below.

January 2018 Phase

Methods

During the January 2018 phase, six shallow monitoring wells were installed along the north, west and east property boundaries. The six wells, identified on Figure 1 as VP-1 through VP-6, were constructed of one-inch PVC plastic and each was screened from approximately five to ten feet below grade (fbg). On January 24, approximately 13 days after installation, groundwater had accumulated within all six wells (see table below). The wells were purged using a bailer and 24 hours later the water levels almost completely rebounded at VP-1, VP-2, VP-3, and VP-6. The static water levels at VP-4 and VP-5 remained approximately nine fbg, as shown in the table below.

Measured Depths-to-Water at Time of Sampling (fbg)

1/24/2018 (13 days after installation)	1/25/2018 (24 hours after purging dry)
VP-1 3.50	VP-1 3.60
VP-2 3.28	VP-2 3.32
VP-3 0.50	VP-3 0.75
VP-4 4.05	VP-4 9.25
VP-5 4.02	VP-5 8.81
VP-6 1.02	VP-6 1.26

On January 24 and 25, ERM used dedicated bailers to purge then collect groundwater samples from each of the six points. The samples were submitted under chain of custody to ALS Laboratory for analysis of volatile organic compounds (VOCs) by EPA Method 8260.

Since VP-4 and VP-5 did not recharge significantly, vapor monitoring points were installed approximately five feet from these monitoring wells. Each vapor monitoring point consisted of two separate Teflon™ lined plastic tubes connected to six-inch stainless steel screens: one centered on the 5 Ft depth interval and one centered on the 8 Ft depth interval. After the integrity of each well seal was verified using a helium shroud test, the vapor monitoring points were sampled using bottle vacuum canisters on January 26 and analyzed by Fibertec lab using EPA Method TO-15.

Results

The January 24-25, 2018 groundwater results are summarized in Table 1 and on Figure 1. The groundwater results were compared to the MDEQ's August 2017 Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs). All results were below the applicable Nonresidential Recommended Interim Action Screening Levels (RIASL) for shallow groundwater. Two VOCs at VP-5 exceeded the Residential RIASL for shallow groundwater (1,1-dichloroethane and cis-1,2 dichloroethene) but these are not highlighted on the table since the Residential RIASLs are not applicable.

The VP-4 and VP-5 soil vapor results collected on January 26, 2018 are summarized in Table 2 and on Figure 1 and were compared to the Nonresidential $RIASL_{12}$, which are applicable for exposures less than 12 hours, and the Time-Sensitive $RIASL_{12}$, which, if exceeded, may require an expedited response action. No exceedances of the Nonresidential $RIASL_{12}$ for any constituents of concern were detected except for trichloroethene (TCE) at VP-5 (5'). This concentration did not exceed the Nonresidential $TSRIASL_{12}$. There were several exceedances of the Residential RIASL (cis-1,2 DCE and TCE) but these are not highlighted on the table since the Residential RIASLs are not applicable. (The static water level collected at VP-5 in March 2018 casted doubt on the representativeness of the vapor samples collected at that location on January 26, 2018. This issue is discussed in more detail in the following sections.)

The properties north of the Site are used for nonresidential purposes. Specifically, the property north of the VP-5 location at 11861 Longsdorf St. is occupied by Electric Power Systems Testing and Engineering.

March 2018 Phase

Methods

The March 2018 phase consisted of installing two additional shallow monitoring wells and vapor points north of VP-5, four feet from the fence and property boundary. The two locations, identified as VP-7 and VP-8 on Figure 1, were approximately 25 Ft apart from each other.

A segment of six-inch diameter PVC pipe was driven into the ground 6 to 12 inches to serve as an outer casing to help ensure that standing surface water did not flow into the open borehole during well construction at each location. The two new wells, identified on Figure 1 as VP-7 and VP-8, were each screened from approximately 5-10 fbg. Eight days after installation and development, the

groundwater levels rose to within two feet of grade at both locations, as shown below, and in Table 3.

Measured Depths-to-Water at Time of Sampling (fbg)

3/14/2018 (8 days after installation)

VP-7 2.72

VP-8 2.38

On March 14, 2018 ERM collected groundwater samples from the two new wells and submitted them under chain of custody to ALS Laboratory for analysis of VOCs by EPA Method 8260. The associated vapor points, which were screened at five feet, could not be sampled due to the presence of shallow groundwater.

Results

The March 14, 2018 groundwater results are summarized on Table 1 and on Figure 1. The following three VOCs were detected at concentrations that exceeded the Nonresidential shallow groundwater RIASL:

- The cis-1,2 DCE groundwater concentrations at VP-7 and VP-8 were 0.055 mg/L and 1.8 mg/L, respectively. The nonresidential screening level is 0.0058 mg/L.

- The tetrachloroethene (PCE) groundwater concentrations at VP-7 and VP-8 were 0.0086 mg/L and 0.56 mg/L, respectively. The nonresidential screening levels for PCE is 0.0044 mg/L.

- The TCE groundwater concentrations at VP-7 and VP-8 were 0.024 mg/L and 3.0 mg/L, respectively. The nonresidential screening levels for TCE is 0.00021 mg/L.

DISCUSSION

The work completed in January and March 2018 was sufficient to screen out the vapor intrusion exposure pathway as a concern around the perimeter of the Site, with the exception of the vicinity of VP-5, VP-7, and VP-8 along the northern property line. The VOCs detected in groundwater at that location do not appear to be derived from the Site based on the following lines of evidence.

1. **Concentration Gradient** - The concentration gradient of VOCs in groundwater at VP-5, VP-7, and VP-8 increases from southwest to northeast, which is opposite of what would be expected if the source was VOC-impacted soil remaining within the footprint of the former building southeast of those three wells. For example, concentrations of cis-1,2-DCE was highest at VP-8 (1.8 mg/L), second highest at VP-7 (0.055 mg/L), and lowest at VP-5 (0.0037). In addition, the PCE and TCE concentrations at VP-8 are 2-3 orders of magnitude higher than at VP-7, located closer to the former building footprint, and these VOCs weren't even detected in groundwater at VP-5. The source of the detections of these VOCs in VP-5 soil gas is believed to be from the VP-8 area.

2. **Groundwater Velocity –** The groundwater seepage velocity through the saturated clay is estimated to be only 0.02 Ft/year based on the following assumptions:

    - The Ground Water Not In An Aquifer (GWNIAA) determination Shelby tube testing indicated that the clay has a hydraulic conductivity of 10^{-7} cm/sec, or 0.00028 Ft/day, or 0.104 Ft/year.

    - The hydraulic gradient across the Site, from former well OW-3 south of the former building to OW-1 north of the former building, is approximately 0.009 Ft/Ft based on July 2009 potentiometric measurements by Geosyntec Consulting.

    - The clay has an assumed an effective porosity of 5%.

    At that velocity it would take approximately 3,000 years for groundwater beneath the former building where solvents were handled and stored, to move 60 feet to the northern property line. Very thin sand seams may be present within the clay matrix through which groundwater transport could occur at a higher velocity, but significant sand seams were not identified during these investigations.

3. **Questionable Representativeness of VP-5 Soil Vapor Samples –** The January 2018 vapor sample results from VP-5, which led to the installation and sampling of VP-7 and VP-8 in March 2018 nearer to the north property line, were later determined not to be representative of the vadose zone. The static water level measurement at VP-5 on March 14, 2018 was 1.40 fbs (see Table 3), indicating that vapor samples collected from that location (at 5 fbs and 8 fbs) on January 26, 2018 were actually from below the water table and not indicative of soil gas. Instead, they were representative of the vapors within the un-equilibrated borehole

immediately surrounding the vapor point at the time of sampling. In retrospect, it appears that the static water level at VP-5 was un-equilibrated at the time of sampling because the yield of the clay formation at that location is very low and insufficient time was allowed between vapor point installation and sampling. Because there were not valid soil gas samples collected at VP-5, shallow groundwater should be used instead to screen the vapor intrusion pathway. The shallow groundwater sample collected from VP-5 did not exceed any applicable screening level.

4. **Residual VOCs Delineated –** Residual PCE and TCE present in soil within the former building footprint was delineated in the direction of VP-5, VP-7, and VP-8 during the robust Corrective Measure Implementation sampling completed in 2013/2014. Those sample results also indicated that PCE was significantly more ubiquitous and at higher concentrations than TCE in the soil beneath the former building. Conversely, at VP-7 and VP-8 the PCE concentrations are 3-5 times *lower* than TCE.

5. **Off-Site Runoff Onto Site** - Standing water along the northern property line appears to come substantially from the paved properties adjacent to the north. The photograph below is a view of the 11861 Longsdorf St. property occupied by Electric Power Systems Testing and Engineering (previously Detroit Apparatus) taken from the VP-5 location looking northward on January 12, 2018. Aerial photographs from multiple dates show miscellaneous equipment and materials being stored on the Electric Power Systems Testing property along the property line very close to VP-7 and VP-8. This operation is a small quantity generator of hazardous waste and liquid industrial waste generator (http://www.deq.state.mi.us/wdspi/Site/Site.aspx?w=442195). According to MDEQ's Inventory of Facilities, the site is a former Leaking Underground Storage Tank site (site ID 82002734) and a Baseline Environmental Assessment was prepared indicating the property is a Part 201 "facility."

6. **Observed Dumping –** While ERM staff was installing VP-8 on March 6, 2018, a policeman named Officer Jakubus introduced himself and inquired about our activity. After ERM explained that we were collecting environmental samples, Officer Jakubus stated that he was previously contracted by GE to provide building security. He went on to state that, "a long time ago" he witnessed an employee of the 11861 Longsdorf St. property "dumping motor oil" along the fence line adjacent to the VP-8 drilling location. He did not recall any additional details aside from telling them to refrain from such activities in the future. ERM verified through contemporaneous documentation that Joseph Jakubus was contracted by GE as a "security caretaker" from 2002 through at least 2006.

RECOMMENDATIONS

Additional vapor intrusion screening is not recommended for the GE property at this time because multiple lines of evidence point to the vapor intrusion exposure pathway being screened out on the basis of groundwater samples collected from VP-1 through VP-6. VOCs detected in groundwater along the northern property line at VP-7 and VP-8 appear to be unrelated to the GE site and most likely derived from an offsite source. The vapor intrusion screening investigation and supporting documentation will be added to the forthcoming revised Corrective Measures Implementation Report.

If you have any questions, or comments, please me at (317) 706-2000.

Sincerely,

Martin Ryan
Principal Consultant

Thomas O'Connell
Partner

Table 1 *Summary of Groundwater Sampling Results*

GE Riverview - 18075 Krause Street, Riverview, Michigan

Parameter	CAS Number	Part 201 Media-Specific Volatilization to Indoor Air Interim Action Screening Levels[1]		Method Detection Limit (MDL)	Analytical Results							
		Shallow Groundwater			VP-1	VP-2	VP-3	VP-4	VP-5	VP-6	VP-7	VP-8
		Residential RIASL	Nonresidential RIASL		Along Western Boundary, Over Sanitary Sewer	Along Western Boundary, Over Storme Sewer	Along Northern Fence, Western Section of Property	Along Northern Fence, Middle Section of Property	Along Northern Fence, Eastern Section of Property	Near Southern Fence, Middle Section of Property	Along Northern Fence, Northwest of VP-5	Near Southern Fence, Northeast of VP-5
					1/24/2018	1/24/2018	1/25/2018	1/24/2018	1/25/2018	1/24/2018	3/14/2018	3/14/2018
VOCs USEPA method 8260 (mg/L)												
1,1,1,2-Tetrachloroethane	630-20-6	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,1,1-Trichloroethane	71-55-6	0.18	0.75	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0056**	< 0.0010	< 0.0010	< 0.020
1,1,2,2-Tetrachloroethane	79-34-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,1,2-Trichloroethane	79-00-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,1,2-Trichlorotrifluoroethane	76-13-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,1-Dichloroethane	75-34-3	0.0047	0.014	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0055**	< 0.0010	< 0.0010	< 0.020
1,1-Dichloroethene	75-35-4	0.018	0.045	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2,3-Trichloropropane	96-18-4	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2,4-Trichlorobenzene	120-82-1	0.0038	0.0058	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2,4-Trimethylbenzene	95-63-6	0.025	0.044	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2-Dibromo-3-chloropropane	96-12-8	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2-Dibromoethane	106-93-4	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2-Dichlorobenzene	95-50-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2-Dichloroethane	107-06-2	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,2-Dichloropropane	78-87-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,3,5-Trimethylbenzene	108-67-8	0.018	0.034	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,3-Dichlorobenzene	541-73-1	0.0026	0.0042	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
1,4-Dichlorobenzene	106-46-7	0.0059	0.015	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
2-Butanone	78-93-3	NE	NE	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.100
2-Hexanone	591-78-6	NE	NE	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.100
2-Methylnaphthalene	91-57-6	NE	NE	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.100
4-Methyl-2-pentanone	108-10-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Acetone	67-64-1	50	62	0.01	**0.010**	< 0.010	< 0.010	< 0.010	< 0.010	**0.027**	< 0.010	< 0.20
Acrylonitrile	107-13-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Benzene	71-43-2	0.001	0.003	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Bromochloromethane	74-97-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Bromodichloromethane	75-27-4	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Bromoform	75-25-2	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Bromomethane	74-83-9	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Carbon disulfide	75-15-0	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Carbon tetrachloride	56-23-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Chlorobenzene	108-90-7	0.033	0.054	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Chloroethane	75-00-3	0.62	1.3	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Chloroform	67-66-3	0.00049	0.0013	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Chloromethane	74-87-3	0.015	0.03	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
cis-1,2-Dichloroethene	156-59-2	0.0034	**0.0058**	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0037**	< 0.0010	**0.055**	**1.8**
cis-1,3-Dichloropropene	10061-01-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Dibromochloromethane	124-48-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Dibromomethane	74-95-3	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Dichlorodifluoromethane	75-71-8	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Diethyl ether	60-29-7	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Ethylbenzene	100-41-4	0.0028	0.0085	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Hexachloroethane	67-72-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Isopropylbenzene	98-82-8	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
m,p-Xylene	179601-23-1	0.075	0.14	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0040
Methyl iodide	74-88-4	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Methyl tert-butyl ether	1634-04-4	0.25	0.61	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Methylene chloride	75-09-2	0.079	0.49	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.100
Naphthalene	91-20-3	NE	NE	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.100
n-Propylbenzene	103-65-1	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
o-Xylene	95-47-6	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Styrene	100-42-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Tetrachloroethene	127-18-4	0.0015	**0.0044**	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0086**	**0.56**
Toluene	108-88-3	0.3	0.85	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
trans-1,2-Dichloroethene	156-60-5	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0023**	**0.019**
trans-1,3-Dichloropropene	10061-02-6	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
trans-1,4-Dichloro-2-butene	110-57-6	NE	NE	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.040
Trichloroethene	79-01-6	0.000073	**0.00021**	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.024**	**3.0**
Trichlorofluoromethane	75-69-4	NE	NE	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Vinyl acetate	108-05-4	0.69	1.0	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.10
Vinyl chloride	75-01-4	0.00012	0.0018	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.020
Xylenes, Total	1330-20-7	0.075	0.14	0.003	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.060

Notes:

- [1]Media-Specific Volatilization to Indoor Air Interim Action Screening Levels, August 2017.
- RIASL = Recommended Interim Action Screening Levels.
- Green shaded cells exceed referenced Shallow Groundwater Nonresidential RIASL.
- NE = Not Established.

Table 2 *Summary of Soil Vapor Sampling Results*
GE Riverview - 18075 Krause Street, Riverview, Michigan

Parameter	CAS Number	2017 MDEQ Part 201[1] Sub-Slab Residential RIASL and Tier I Soil Vapor	2017 MDEQ Part 201 Sub-Slab Non-Residential $RIASL_{12}$	2017 MDEQ Part 201 Sub-Slab Non-Residential $TSRIASL_{12}$	Measured Detection Limit (MDL)	Sample Location, Date & Concentration			
						VP-5 (5') 01/26/2018	VP-5 (8') 01/26/2018	VP-4 (5') 01/26/2018	VP-4 (8') 01/26/2018
						Along Northern Fence Eastern Section of Site	Along Northern Fence Eastern Section of Site	Along Northern Fence Middle Section of Site	Along Northern Fence Middle Section of Site
		($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Volatile Organic Compound (VOC)									
Acetone	67-64-1	1,000,000	1,000,000	1,000,000	57	<57	<57	<57	<57
Benzene	71-43-2	110	510	1,800	19	**31**	**48**	<19	**49**
Benzyl Chloride	100-44-7	17	NE	NE	6.2	<6.2	<6.2	<6.2	<6.2
Bromodichloromethane	75-27-4	48	NE	NE	8	<8	<8	<8	<8
Bromoform	75-25-2	770	NE	NE	62	<62	<62	<62	<62
Bromomethane	74-83-9	350	NE	NE	23	<23	<23	<23	<23
1,3-Butadiene	106-99-0	NE	NE	NE	0.74	**3.8**	**16**	**1.5**	**11**
2-Butanone	78-93-3	170,000	NE	NE	35	<35	<35	<35	<35
Carbon Disulfide	75-15-0	24,000	NE	NE	40	**61**	<37	**57**	**67**
Carbon Tetrachloride	56-23-5	150	NE	NE	7.5	<7.5	<7.5	<7.5	<7.5
Chlorobenzene	108-90-7	1,700	5,100	15,000	28	<28	<28	<28	<28
Chloroethane	75-00-3	140,000	410,000	1,200,000	16	<16	<16	<16	<16
Chloroform	67-66-3	37	170	1,700	5.9	<5.9	<5.9	<5.9	<5.9
Chloromethane	74-87-3	3,100	9,200	14,000	12	<12	<12	<12	<12
Cyclohexane	110-82-7	210,000	NE	NE	41	<41	<41	<41	<41
Dibromochloromethane	124-48-1	370	NE	NE	4.1	<4.1	<5.3	<4.1	<4.1
1,2-Dichlorobenzene	95-50-1	10,000	NE	NE	36	<36	<36	<36	<36
1,3-Dichlorobenzene	541-73-1	100	310	920	36	<36	<36	<36	<36
1,4-Dichlorobenzene	106-46-7	220	1,000	10,000	36	<36	<36	<36	<36
Dichlorodifluoromethane	75-71-8	11,000	NE	NE	30	<30	<55	<30	<30
1,1-Dichloroethane	75-34-3	530	2,500	25,000	24	**270**	**270**	<24	<24
1,2-Dichloroethane	107-06-2	33	NE	NE	4.6	<4.9	<4.9	<4.9	<4.9
1,1-Dichloroethene	75-35-4	7,000	20,000	61,000	24	<24	<24	<24	<24
cis-1,2-Dichloroethene	156-59-2	280	820	2,500	24	**330**	**180**	<24	<24
trans-1,2-Dichloroethene	156-60-5	9,000	26,000	26,000	24	**45**	**35**	<24	<24
1,2-Dichloropropane	78-87-5	140	NE	NE	28	<28	<28	<28	<28
cis-1,3-Dichloropropene	10061-01-5	NE	NE	NE	27	<27	<27	<27	<27
trans-1,3-Dichloropropene	10061-02-6	NE	NE	NE	27	<27	<27	<27	<27
1,4-Dioxane	123-91-1	170	NE	NE	22	<22	<22	<22	<22
Ethyl Acetate	141-78-6	2,400	NE	NE	43	<43	<43	<43	<43
Ethylbenzene	100-41-4	340	1,600	16,000	56.4	<52	**54**	<52	<52
Ethylene Dibromide	106-93-4	1.4	NE	NE	1.1	<0.97	<2.1	<1.1	<1.1
n-Heptane	142-82-5	120,000	NE	NE	49.2	**89**	**160**	**85**	**130**
Hexachlorobutadiene	87-68-3	39	NE	NE	5.1	<5.1	<2.1	<5.1	<5.1
n-Hexane	110-54-3	24,000	72,000	210,000	45.7	**91**	**160**	**110**	**170**
2-Hexanone	591-78-6	1,000	NE	NE	49	<49	<49	<49	<49
Isopropanol	67-63-0	NE	NE	NE	29	<29	<29	<29	<29
Methylene Chloride	75-09-2	21,000	61,000	97,000	42	<42	<44	<42	<42
2-Methylnaphthalene	91-57-6	350	NE	NE	140	<140	<150	<140	<140
4-Methyl-2-pentanone	108-10-1	100,000	NE	NE	49	<49	<49	<49	<49
MTBE	1634-04-4	3,300	15,000	150,000	22	<22	<22	<22	<22
Naphthalene	91-20-3	25	NE	NE	28	<28	<28	<28	<28
Styrene	100-42-5	1,500	NE	NE	51	<51	<57	<51	<51
1,1,2,2-Tetrachloroethane	79-34-5	15	NE	NE	3.3	<3.3	<3.3	<3.3	<3.3
Tetrachloroethene	127-18-4	1,400	2,700	2,700	44	**460**	**700**	**140**	**130**
Tetrahydrofuran	109-99-9	70,000	NE	NE	12	<11	<23	<12	<13
Toluene	108-88-3	170,000	250,000	250,000	24.5	**130**	**260**	**120**	**140**
1,2,4-Trichlorobenzene	120-82-1	70	200	610	89	<89	<98	<89	<89
1,1,1-Trichloroethane	71-55-6	170,000	230,000	230,000	33	**320**	**1,500**	<33	<33
1,1,2-Trichloroethane	79-00-5	**0.0070**	NE	NE	6.5	**<6.5**	**<6.5**	**<89**	**<6.5**
Trichloroethene	79-01-6	**67**	**130**	400	1.7	**210**	**16**	<6.5	<1.6
Trichlorofluoromethane	75-69-4	15,000	NE	NE	34	<34	<34	<1.6	<34
1,1,2-Trichlorotrifluoroethane	76-13-1	660,000	NE	NE	46	<46	<46	<34	<46
1,2,4-Trimethylbenzene	95-63-6	2,100	6,100	18,000	31.9	<46	**73**	<29	<29
1,3,5-Trimethylbenzene	108-67-8	2,100	6,100	18,000	29	<29	<29	<29	<29
Vinyl Acetate	108-05-4	7,000	20,000	61,000	42	<29	<42	<42	<42
Vinyl Chloride	75-01-4	54	910	9,100	15	<42	<15	<15	<15
m&p-Xylene	136777-61-2	7,600	22,000	67,000	52	**64**	**210**	<52	<52
o-Xylene	95-47-6	7,600	22,000	67,000	52	<52	<52	<52	<52
Xylenes	1330-20-7	7,600	22,000	67,000	100	<100	**250**	<100	<100

Notes:

- [1] = Media-Specific Volatilization to Indoor Air Interim Action Screening Levels, August 2017
- "RIASL" = Recommended Interim Action Screening Levels is based on a former residential structure that is now non-residential use that has an unoccupied basement.
- "$TSRIASL_{12}$" = Time-Sensitive Recommended Interim Action Screening Levels is appropriate for exposures less than 12 hours.
- CAS = Chemical abstract service.
- MDEQ = Michigan Department of Environmental Quality
- $\mu g/m^3$ = Micrograms per cubic meter.
- Laboratory analysis performed per EPA Method TO-15.
- NE = Not Established.

Table 3 *Static water levels measured at VP-series monitoring wells.*
GE Riverview - 18075 Krause Street, Riverview, Michigan

Dates	Soil Vapor Probe Locations							
	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6	VP-7	VP-8
	Installed 1/11/2018						Installed 3/06/2018	
	Static Water Level (feet below ground surface)							
1/12/2018	4.64	2.92	0.30	9.52	None	0.72	NA	NA
1/24/2018	3.50	3.28	0.50	4.05	4.02	1.02	NA	NA
1/25/2018	3.60	3.32	0.75	9.21	8.81	1.26	NA	NA
3/14/2018	2.88	2.98	1.73	0.67	1.40	1.53	2.72	2.38

Notes:
- NA = Not Applicable.

GROUNDWATER AND VAPOR SAMPLE RESULTS

VP-3 1/25/2018	
Groundwater	
Analyte	
All Analytes	BSL

VP-2 1/24/2018	
Groundwater	
Analyte	
All Analytes	BSL

VP-4 1/24/2018	
Groundwater	
Analyte	
All Analytes	BSL
Soil Vapor 1/26/2018	
VP-4 (5')	
All Analytes	BSL
VP-4 (8')	
All Analytes	BSL

VP-1 1/24/2018	
Groundwater	
Analyte	
All Analytes	BSL

VP-6 1/24/2018	
Groundwater	
Analyte	
All Analytes	BSL

VP-7 3/14/2018	
Analyte	mg/L
Groundwater	
cis-1,2-Dichloroethene	0.055
Tetrachloroethene	0.0086
Trichloroethene	0.024

VP-8 3/14/2018	
Analyte	mg/L
Groundwater	
cis-1,2-Dichloroethene	1.8
Tetrachloroethene	0.56
Trichloroethene	3.0

VP-5 1/25/2018	
Analyte	mg/L
Groundwater	
1,1-Dichloroethane	0.0055
cis-1,2-Dichloroethene	0.0037
1,1,1-Trichloroethane	0.0056
Soil Vapor 1/26/2018	
VP-5 (5')*	ug/m^3
cis-1,2-Dichloroethene	330
Trichloroethene	210
All Analytes	BSL

VP-1 VP-2 VP-3 VP-4 VP-5 VP-6 VP-7 VP-8

BUILDING
KRAUSE STREET
APPARATUS SERVICE CENTER
APPROXIMATE PCE IMPACTED AREA
NORTH LOADING DOCK
LOADING DOCK
AOC #2 SHOP PRODUCTION AREA
SWMU #3 WEST SUMP
SWMU #2 FORMER OUTDOOR CONTAINER STORAGE AREA
SWMU #3 EASTERN STEAM CLEANING SUMP
AOC #1 1976 OIL SPILL AREA
UNDEVELOPED VEGETATED AREA
PONDED WATER
PONDED WATER
BUILDING
MH-WEST
MHW
MH
MHD
MHD1
STUB
8'bgs
5'bgs
10'bgs
17.5'bgs
15'bgs
WV
DETROIT & TOLEDO SHORE LINE RAILROAD

LEGEND

- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- FIRE HYDRANT
- FIRE HYDRANT SHUT-OFF VALVE
- x FENCE
- ST STORM SEWER
- SS SANITARY SEWER
- W WATER MAIN
- G GAS LINE
- RAILROAD TRACK
- PROPERTY BOUNDARY
- VAPOR POINT CLUSTER LOCATION

NOTE:
GREEN SHADING INDICATES EXCEEDANCES OF THE NONRESIDENTIAL MEDIA-SPECIFIC VOLATILIZATION TO INDOOR AIR INTERIM ACTION SCREENING LEVEL, AUGUST 2017

2. BSL = ALL ANALYTES WERE EITHER BELOW THE DETECTION LIMIT OR BELOW APPLICABLE SCREENING LEVELS, SEE TABLES 1 AND 2.

* – VAPOR SAMPLE NOT REPRESENTATIVE OF VADOSE ZONE SOIL GAS.

N

0 80 160

SCALE (IN FEET)

NOTE: THE AERIAL PHOTO WAS TAKEN PRIOR TO THE NOV/DEC 2014 BUILDING DECONSTRUCTION

Drawn By	GML
CADD Review	RMK
Date Drawn/Rev'd	2/24/12 – 4/24/18

ERM®

GENERAL ELECTRIC

FORMER APPARATUS SERVICE CENTER
18075 KRAUSE STREET, RIVERVIEW, MICHIGAN

Environmental Resources Management

CHK'D	DRR
	0442424
	FIGURE 1

Q:\Team\DMW\CIntE-H\General Electric\0442424\0442424-01.DWG, VAPOR SAMPLING LOCATIONS TEXT BOXES, 4/27/2018 1:32:55 PM, GML

Boring Logs and Construction Diagrams

3352 128th Avenue
Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-1**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Hand Auger	DATE: START	01/11/2018
DRILLING EQUIPMENT	Hand Auger	FINISH	01/11/2018
HORIZONTAL DATUM		BOREHOLE DEPTH	9.5 ft
NORTHING		BOREHOLE DIAMETER	2.4 in
EASTING		DEPTH TO WATER (INITIAL) ▼	4.64 ft
VERTICAL DATUM	ELEVATION	DEPTH TO WATER (FINAL) ▽	

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG	SAMPLING DATA: SAMPLE TYPE	RECOVERY	PID (ppm) 10.6 eV Lamp	Observations / Remarks
		SAND (SP) contains organics, dark brown	0.5	SP				0	
		CLAY (CL) stiff, trace gravel, dry, brown, with gray silt seams							
2				CL				0	
4							114/114		
6		CLAY (CH) high plasticity, stiff, trace gravel, dry, brown	6						
8				CH				0	
		[EOB @ 9.5' due to auger refusal]	9.5						
10			10.5						
12									
14									

REMARKS:
Hand Auger entire boring.

LAB ANALYSIS:

BORING LOG GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

3352 128th Avenue
Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-2**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Hand Auger	DATE: START	01/11/2018
DRILLING EQUIPMENT	Hand Auger	FINISH	01/11/2018
HORIZONTAL DATUM		BOREHOLE DEPTH	10 ft
NORTHING		BOREHOLE DIAMETER	2.4 in
EASTING		DEPTH TO WATER (INITIAL) ▼	2.92 ft
VERTICAL DATUM	ELEVATION	DEPTH TO WATER (FINAL) ▽	

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG	SAMPLING DATA: SAMPLE TYPE	RECOVERY	PID (ppm) 10.6 eV Lamp	Observations / Remarks
		SAND (SP) contains organics, dark brown	0.5	SP					
		CLAY (CH) high plasticity, stiff, dark brown	1	CH					
		SANDY GRAVEL (GP-SP) poorly graded, fine grained GRAVEL; brown	1.1	GP-SP					
2		CLAY (CL) stiff, trace gravel, brown, with gray silt seams						0	
4				CL			120/120		
6									
		CLAY (CH) stiff, wet, brown	7	CH				0	
8		GRAVELLY CLAY (GC) stiff, dry, brown, with gray silt seams	8	GC					
10		[EOB @ 10']	10						
			11						
12									
14									

REMARKS:
Hand Auger entire boring.

LAB ANALYSIS:

BORING LOG GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

ERM
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Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # VP-3

ERM PROJECT # 0442424

SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018
HORIZONTAL DATUM		BOREHOLE DEPTH	10 ft
NORTHING		BOREHOLE DIAMETER	2.4 in
EASTING		DEPTH TO WATER (INITIAL) ▼	0.3 ft
VERTICAL DATUM	ELEVATION	DEPTH TO WATER (FINAL) ▽	

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG	SAMPLING DATA: SAMPLE TYPE	RECOVERY	PID (ppm) 10.6 eV Lamp	Observations / Remarks
		SAND (SP) contains organics, dark brown ▼	0.5	SP					
		CLAY (CL) stiff, dark brown, with gray silt seams		CL					
2		CLAY (CL) stiff, trace gravel, dark brown, with gray silt seams	2				60/60	0	
4									
6				CL			36/36	0	
8									
							24/24	0	
10		[EOB @10']	10						
			11						
12									
14									

REMARKS:
Hand Auger to 5' bgs.

LAB ANALYSIS:

BORING LOG GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

3352 128th Avenue
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PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-4**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018
HORIZONTAL DATUM		BOREHOLE DEPTH	10 ft
NORTHING		BOREHOLE DIAMETER	2.4 in
EASTING		DEPTH TO WATER (INITIAL) ▼	9.52 ft
VERTICAL DATUM	ELEVATION	DEPTH TO WATER (FINAL) ▽	

DEPTH / ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG	SAMPLING DATA: SAMPLE TYPE	RECOVERY	PID (ppm) 10.6 eV Lamp	Observations / Remarks
	SAND (SP) contains organics, dark brown		SP					
		0.5						
	CLAY (CL) stiff, trace gravel, dry, brown, with gray silt seams					60/60	0	
2			CL					
4								
6		6				36/36	0	
	CLAY (CH) stiff, trace gravel, dry, brown							
8			CH					
						24/24	0	
10	[EOB @ 10']	10						
		11						
12								
14								

REMARKS:
Hand Auger to 5' bgs.

LAB ANALYSIS:

BORING LOG GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

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PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # VP-5

ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018
HORIZONTAL DATUM		BOREHOLE DEPTH	10 ft
NORTHING		BOREHOLE DIAMETER	2.4 in
EASTING		DEPTH TO WATER (INITIAL) ▼	
VERTICAL DATUM	ELEVATION	DEPTH TO WATER (FINAL) ▽	

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG	SAMPLING DATA: SAMPLE TYPE	RECOVERY	PID (ppm) 10.6 eV Lamp	Observations / Remarks
		SAND (SP) contains organics, dark brown	0.5	SP					
		CLAY (CL) stiff, dark brown		CL					
2			2.5				60/60	0	
		CLAY (CL) stiff, trace gravel, light grayish brown							
4									
6				CL			36/36	0	
8									
							24/24	0	
10		[EOB @ 10']	10						
			11						
12									
14									

REMARKS:
Hand Auger to 5' bgs.

LAB ANALYSIS:

BORING LOG GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

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PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # VP-6

ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018
HORIZONTAL DATUM		BOREHOLE DEPTH	10 ft
NORTHING		BOREHOLE DIAMETER	2.4 in
EASTING		DEPTH TO WATER (INITIAL) ▼	0.72 ft
VERTICAL DATUM	ELEVATION	DEPTH TO WATER (FINAL) ▽	

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG	SAMPLING DATA: SAMPLE TYPE	RECOVERY	PID (ppm) 10.6 eV Lamp	Observations / Remarks
		[Asphalt]	0.2						
		SANDY GRAVEL (GP-SP) poorly graded, fine grained SAND; coarse grained GRAVEL; wet, dark brown		GP-SP				0	
2			2.5				60/60		
		CLAY (CL) stiff, dry, gray							
4				CL				0	
6			6					0	
		CLAY (CL) stiff, trace gravel, dry, brown					36/36		
8				CL				0	
							24/24		
10		[EOB @ 10']	10					0	
			11						
12									
14									

REMARKS:
Hand Auger to 5' bgs.

LAB ANALYSIS:

BORING LOG GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

3352 128th Avenue
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PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-1**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Hand Auger	DATE: START	01/11/2018
DRILLING EQUIPMENT	Hand Auger	FINISH	01/11/2018

GEOGRAPHIC COORDINATES
()
NORTHING
EASTING
Elevation/Top of Casing Elev.

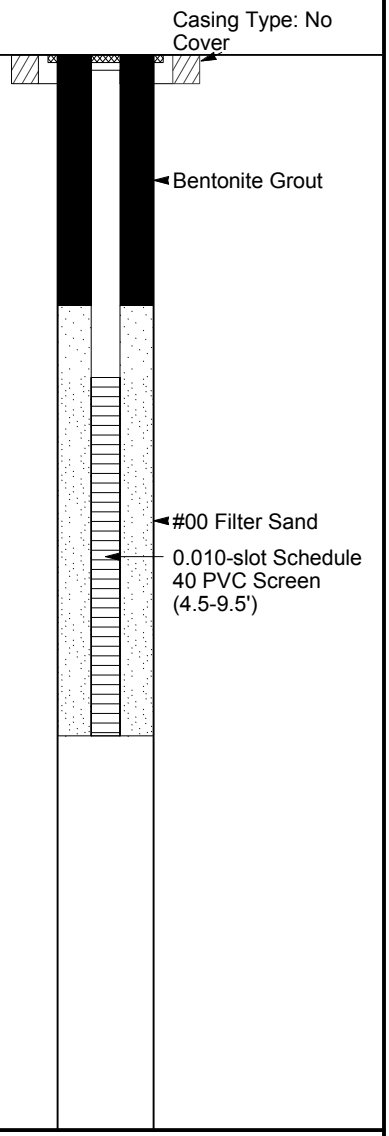
WELL CONSTRUCTION

	Riser	Screen
Material:	*Schedule 40 PVC*	*Schedule 40 PVC, 0.010-slot*
Diameter (ID):	*1-inch*	*1-inch*
Coupling:	*Threaded*	*Threaded*

WELL DEVELOPMENT
Method: *Bailer*
Duration: *0.5 hours*
Gals. Purged: *0.6*

Well Permit #: *No permit required.*

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG
		SAND (SP) contains organics, dark brown	0.5	SP	
		CLAY (CL) stiff, trace gravel, dry, brown, with gray silt seams		CL	
6		CLAY (CH) high plasticity, stiff, trace gravel, dry, brown	6	CH	
		[EOB @ 9.5' due to auger refusal]	9.5		
			10.5		



REMARKS:
Hand Auger entire boring.

WELL INSTALLATION NOTES:

WELL CONSTRUCTION GE RIVERVIEW.GPJ ERM DATA TEMPLATE.GDT 2/2/18

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PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-2**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Hand Auger	DATE: START	01/11/2018
DRILLING EQUIPMENT	Hand Auger	FINISH	01/11/2018

GEOGRAPHIC COORDINATES
()
NORTHING
EASTING
Elevation/Top of Casing Elev.

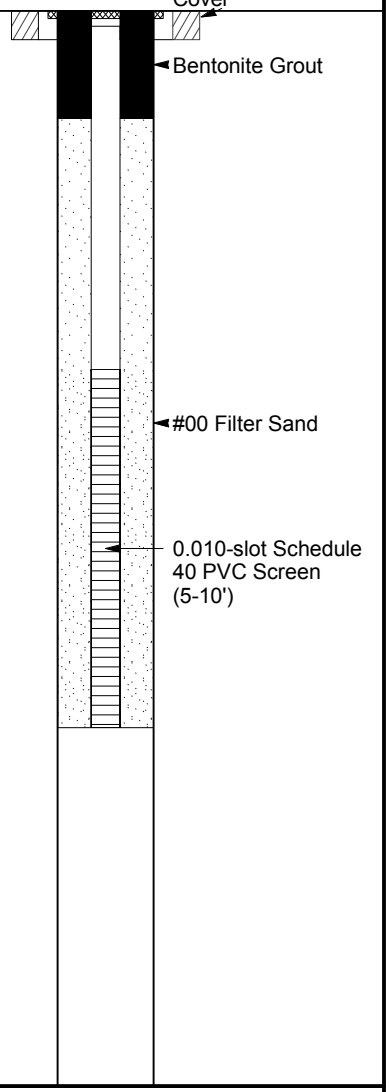
WELL CONSTRUCTION

	Riser	Screen
Material:	*Schedule 40 PVC*	*Schedule 40 PVC, 0.010-slot*
Diameter (ID):	*1-inch*	*1-inch*
Coupling:	*Threaded*	*Threaded*

WELL DEVELOPMENT
Method: *Bailer*
Duration: *0.5 hours*
Gals. Purged: *1.0*

Well Permit #: *No permit required.*

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG
		SAND (SP) contains organics, dark brown	0.5	SP	
		CLAY (CH) high plasticity, stiff, dark brown	1	CH	
		SANDY GRAVEL (GP-SP) poorly graded, fine grained GRAVEL; brown	1.1	GP-SP	
2		CLAY (CL) stiff, trace gravel, brown, with gray silt seams			
4				CL	
6					
		CLAY (CH) stiff, wet, brown	7	CH	
8		GRAVELLY CLAY (GC) stiff, dry, brown, with gray silt seams	8	GC	
10		[EOB @ 10']	10		
			11		
12					
14					



REMARKS:
Hand Auger entire boring.

WELL INSTALLATION NOTES:

3352 128th Avenue
Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-3**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018

GEOGRAPHIC COORDINATES
()
NORTHING
EASTING
Elevation/Top of Casing Elev.

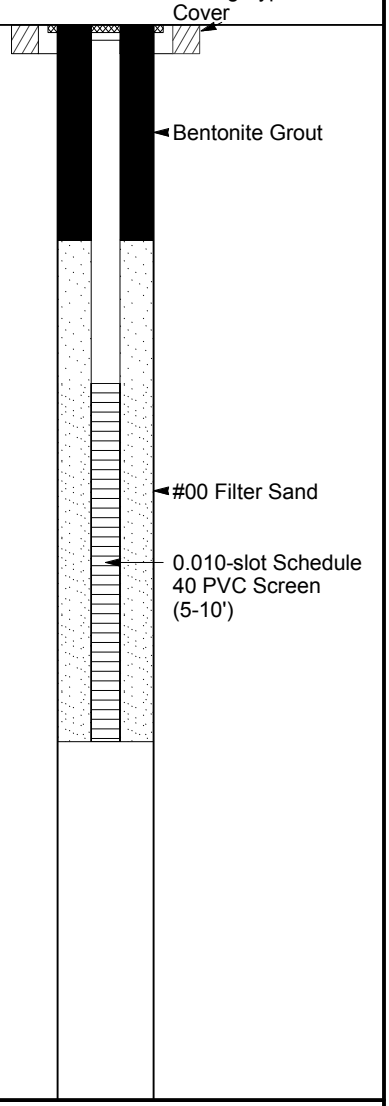
WELL CONSTRUCTION

	Riser	Screen
Material:	*Schedule 40 PVC*	*Schedule 40 PVC, 0.010-slot*
Diameter (ID):	*1-inch*	*1-inch*
Coupling:	*Threaded*	*Threaded*

WELL DEVELOPMENT
Method: *Bailer*
Duration: *0.5 hours*
Gals. Purged: *0.5*

Well Permit #: *No permit required.*

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG
		SAND (SP) contains organics, dark brown		SP	
		CLAY (CL) stiff, dark brown, with gray silt seams	0.5	CL	
2		CLAY (CL) stiff, trace gravel, dark brown, with gray silt seams	2		
4					
6				CL	
8					
10		[EOB @10']	10		
			11		
12					
14					



REMARKS:
Hand Auger to 5' bgs.

WELL INSTALLATION NOTES:

3352 128th Avenue
Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-4**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018

GEOGRAPHIC COORDINATES
()
NORTHING
EASTING
Elevation/Top of Casing Elev.

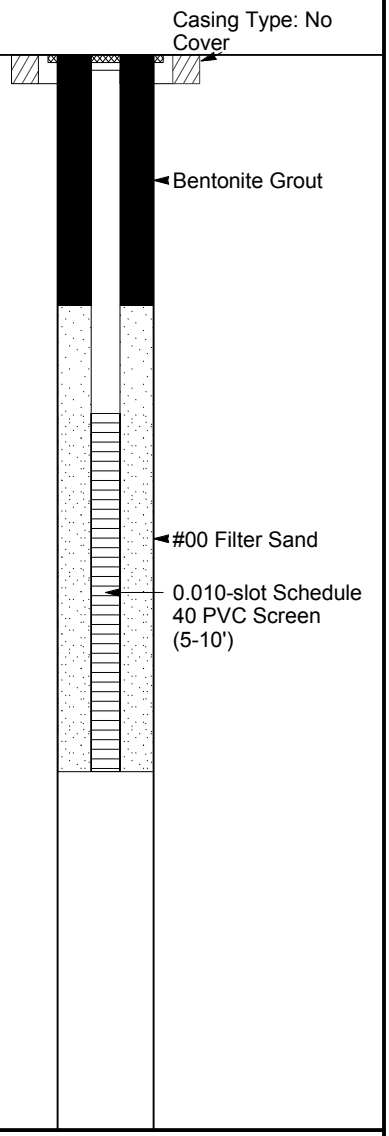
WELL CONSTRUCTION

	Riser	Screen
Material:	*Schedule 40 PVC*	*Schedule 40 PVC, 0.010-slot*
Diameter (ID):	*1-inch*	*1-inch*
Coupling:	*Threaded*	*Threaded*

WELL DEVELOPMENT
Method: *Bailer*
Duration: *0.5 hours*
Gals. Purged: *0.5*

Well Permit #: *No permit required.*

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG
		SAND (SP) contains organics, dark brown	0.5	SP	
		CLAY (CL) stiff, trace gravel, dry, brown, with gray silt seams		CL	
6		CLAY (CH) stiff, trace gravel, dry, brown	6	CH	
10		[EOB @ 10']	10		
			11		



REMARKS:
Hand Auger to 5' bgs.

WELL INSTALLATION NOTES:

3352 128th Avenue
Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-5**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018

GEOGRAPHIC COORDINATES
()
NORTHING
EASTING
Elevation/Top of Casing Elev.

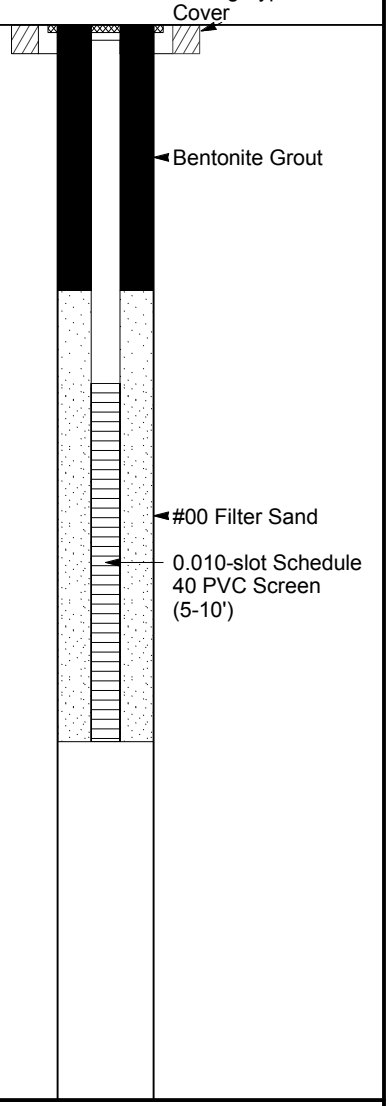
WELL CONSTRUCTION

	Riser	Screen
Material:	*Schedule 40 PVC*	*Schedule 40 PVC, 0.010-slot*
Diameter (ID):	*1-inch*	*1-inch*
Coupling:	*Threaded*	*Threaded*

WELL DEVELOPMENT
Method: *Bailer*
Duration: *0.5 hours*
Gals. Purged: *0.5*

Well Permit #: *No permit required.*

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG
		SAND (SP) contains organics, dark brown	0.5	SP	
		CLAY (CL) stiff, dark brown		CL	
2			2.5		
		CLAY (CL) stiff, trace gravel, light grayish brown			
4					
6				CL	
8					
10		[EOB @ 10']	10		
			11		
12					
14					



REMARKS:
Hand Auger to 5' bgs.

WELL INSTALLATION NOTES:

3352 128th Avenue
Holland, MI 49424
P: 616-399-3500

PROJECT:
GE Riverview
VI Screening Assessment
Riverview, Michigan

BORING # **VP-6**
ERM PROJECT # 0442424
SHEET 1 OF 1

DRILLING CONTRACTOR	Terra Probe Ottawa, Michigan	ERM REPRESENTATIVE	Dan Rusiecki
DRILLING FOREMAN	Scott Seams	OFFICE LOCATION	Holland, MI
DRILLING METHOD	Direct Push	DATE: START	01/11/2018
DRILLING EQUIPMENT	Geoprobe 6620DT	FINISH	01/11/2018

GEOGRAPHIC COORDINATES
()
NORTHING
EASTING
Elevation/Top of Casing Elev.

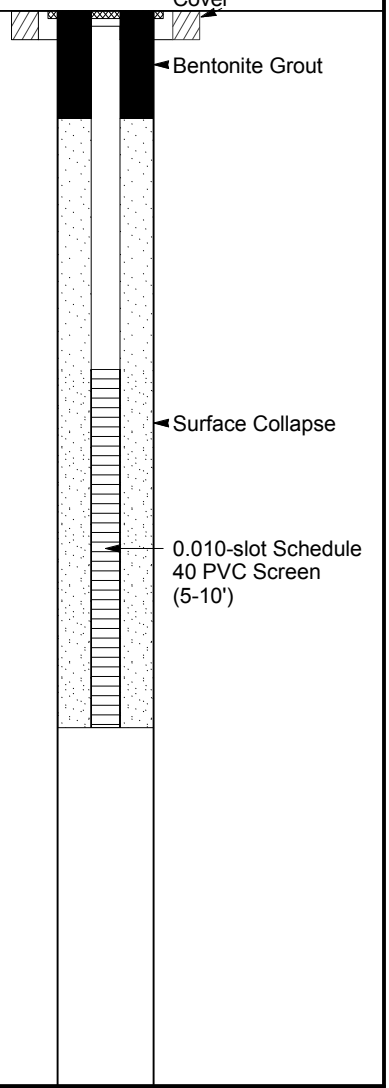
WELL CONSTRUCTION

	Riser	Screen
Material:	*Schedule 40 PVC*	*Schedule 40 PVC, 0.010-slot*
Diameter (ID):	*1-inch*	*1-inch*
Coupling:	*Threaded*	*Threaded*

WELL DEVELOPMENT
Method: *Bailer*
Duration: *0.5 hours*
Gals. Purged: *1.0*

Well Permit #: *No permit required.*

DEPTH	ELEVATION	STRATA DESCRIPTION	DEPTH	USCS	GRAPHIC LOG
		[Asphalt]	0.2		
		SANDY GRAVEL (GP-SP) poorly graded, fine grained SAND; coarse grained GRAVEL; wet, dark brown		GP-SP	
2			2.5		
		CLAY (CL) stiff, dry, gray		CL	
4					
6		CLAY (CL) stiff, trace gravel, dry, brown	6		
8				CL	
10		[EOB @ 10']	10		
			11		
12					
14					



REMARKS:
Hand Auger to 5' bgs.

WELL INSTALLATION NOTES:

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Boring ID:	VP-7
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, Michigan
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 10:40 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 12:45 pm
HOIZONTAL DATUM			
Northing:		**Borehole Depth (Feet):**	10'
Easting:		**Borehole Diameter (inches):**	4" / 2"
		Depth to Water (Initial):	surface
Ground Elevation (ft):		**Depth to Water (Final):**	

Depth Interval (Ft - bgl)	Primary Geological Unit	Grain Size/ Characteristic	Secondary Geological Unit	Grain Size/ Characteristic	Color	Physical State (i.e., dry, wet)	Comments
0-0.5'	Topsoil	Organic	with silty sand		Dark Brown	Wet	No Odor
0.5-10'	Clay	Stiff	with trace Gravel		Brown	Dry	No Odor (with gray silt seam)
EOB @ 10'							

NOTES: Hand auger to 8' - geoprobe core to 10'
Hand auger 4" diameter, geoprobe core 2".

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Well ID:	VP-7
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, MI
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 10:40 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 12:45 pm

HOIZONTAL DATUM			Riser	Screen
Northing:		**Material:**	PVC	PVC
Easting:		**Diameter (ID - inch):**	1"	1"
		Coupling:	Threaded	Threaded
Ground Elevation:				
Well Casing Elevation:			**Well Development**	
Groundwater Depth:		**Method:**	Peristaltic Pump	
		Duration:	15 Minutes	
		Gallons Purged:	3-gallons	
Comments:				

Recovery (ft)	PID Reading (ppm)	Lab Sample	Blow Counts	Graphic Log	Well Construction	Well Material Demention	Bore Hole Fill
						1.5' Riser	Surface
10'	0					Casing	Concrete
	0						1.5'
							Bentonite Chips
							3.5'
						5'	
						10 Slot Screen	Filter Sand
						10'	
						Cap	
						10'	10'

Ground

1'
2'
3'
4'
5'
6'
7'
8'
9'
10'

Legend
Sand
Gravel
Clay
Silt
Asphalt
Concrete
Topsoil

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Boring ID:	VP-7 (5')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, Michigan
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 11:45 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 12:40 pm
HOIZONTAL DATUM			
Northing:		**Borehole Depth (Feet):**	5'
Easting:		**Borehole Diameter (inches):**	2"
		Depth to Water (Initial):	surface
Ground Elevation (ft):		**Depth to Water (Final):**	

Depth Interval (Ft - bgl)	Primary Geological Unit	Grain Size/ Characteristic	Secondary Geological Unit	Grain Size/ Characteristic	Color	Physical State (i.e., dry, wet)	Comments
0-0.5'	Topsoil	Organic	with silty sand		Dark Brown	Wet	No Odor
0.5-5'	Clay	Stiff	with trace Gravel		Brown	Dry	No Odor (with gray silt seam)
EOB @ 5'							

NOTES: Hand auger to 5'
Hand auger 2" diameter.

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Well ID:	VP-7 (5')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, MI
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 11:45 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 12:40 pm
			Well Construction
HOIZONTAL DATUM			Riser: Teflon; Screen: Stainless Steel
Northing:		**Material:**	Riser: Teflon; Screen: Stainless Steel
Easting:		**Diameter (ID - inch):**	Riser: <1"; Screen: <1"
		Coupling:	Riser: Threaded; Screen: Threaded
Ground Elevation:			
Well Casing Elevation:			**Well Development**
Groundwater Depth:		**Method:**	Peristaltic pump
		Duration:	15 minutes
		Gallons Purged:	1-gallon
Comments:			

Recovery (ft)	PID Reading (ppm)	Lab Sample	Blow Counts	Graphic Log	Well Construction	Well Material Demention	Bore Hole Fill
						80" Riser	
Ground							Surface
1'							
2'							
3'	5'	0					
4'							
5'							
6'							
7'							
8'							
9'							
10'							
						Teflon tubing	Concrete
							1.5'
							Bentonite Chips
							4.2'
						4.5'	
						soil vapor probe	Filter Sand
						5'	
						Cap	
						5'	5.1'

Legend
- Sand
- Gravel
- Clay
- Silt
- Asphalt
- Concrete
- Topsoil

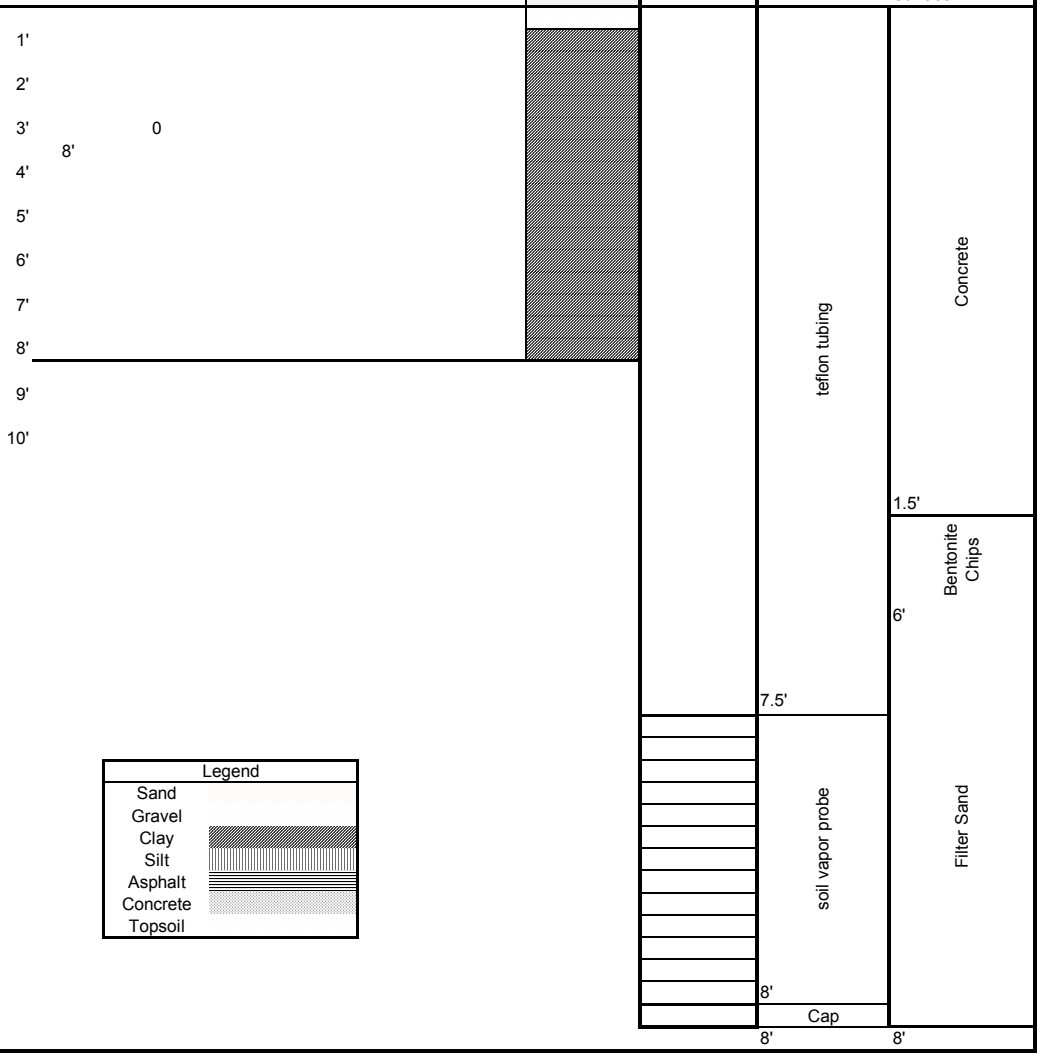
ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Boring ID:	VP-7 (8')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, Michigan
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 11:45 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 12:45 pm
HOIZONTAL DATUM			
Northing:		**Borehole Depth (Feet):**	8'
Easting:		**Borehole Diameter (inches):**	2"
		Depth to Water (Initial):	surface
Ground Elevation (ft):		**Depth to Water (Final):**	

Depth Interval (Ft - bgl)	Primary Geological Unit	Grain Size/ Characteristic	Secondary Geological Unit	Grain Size/ Characteristic	Color	Physical State (i.e., dry, wet)	Comments
0-0.5'	Topsoil	Organic	with silty sand		Dark Brown	Wet	No Odor
0.5-8'	Clay	Stiff	with trace Gravel		Brown	Dry	No Odor (with gray silt seam)
EOB @ 8'							

NOTES: Hand auger to 8'
Hand auger 2" diameter.

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Well ID:	VP-7 (8')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, MI
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 11:45 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 12:45 pm
			Well Construction
HOIZONTAL DATUM			Riser / Screen
Northing:		**Material:**	Teflon / Stainless Steel
Easting:		**Diameter (ID - inch):**	<1" / <1"
		Coupling:	Threaded / Threaded
Ground Elevation:			
Well Casing Elevation:			**Well Development**
Groundwater Depth:		**Method:**	Peristaltic pump
		Duration:	15 minutes
		Gallons Purged:	1-gallon
Comments:			

Recovery (ft)	PID Reading (ppm)	Lab Sample	Blow Counts	Graphic Log	Well Construction	Well Material Demention	Bore Hole Fill
						95" Riser	Surface



ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Boring ID:	VP-8
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, Michigan
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 9:50 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 14:45 pm
HOIZONTAL DATUM			
Northing:		**Borehole Depth (Feet):**	10'
Easting:		**Borehole Diameter (inches):**	4" / 2"
		Depth to Water (Initial):	surface
Ground Elevation (ft):		**Depth to Water (Final):**	

Depth Interval (Ft - bgl)	Primary Geological Unit	Grain Size/ Characteristic	Secondary Geological Unit	Grain Size/ Characteristic	Color	Physical State (i.e., dry, wet)	Comments
0-0.5'	Topsoil	Organic	with trace silty sand		Dark Brown	Wet	No Odor
0.5-10'	Clay	Stiff	with trace Gravel		Brown	Dry	No Odor (with gray silt seam)
EOB @ 10'							

NOTES: Hand auger to 8' - geoprobe core to 10'
Hand auger 4" diameter, geoprobe core 2".

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Well ID:	VP-8
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, MI
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 9:50 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 14:45 pm
			Well Construction
HOIZONTAL DATUM			Riser / Screen
Northing:		**Material:**	PVC / PVC
Easting:		**Diameter (ID - inch):**	1" / 1"
		Coupling:	Threaded / Threaded
Ground Elevation:			
Well Casing Elevation:			**Well Development**
Groundwater Depth:		**Method:**	Peristaltic pump
		Duration:	15 minutes
		Gallons Purged:	3-gallons
Comments:			

Recovery (ft)	PID Reading (ppm)	Lab Sample	Blow Counts	Graphic Log	Well Construction	Well Material Demention	Bore Hole Fill
						1' Riser	Surface
10'	0 0					5' Casing 10' 10 Slot Screen Cap	2' Concrete 4' Bentonite Chips Filter Sand 10'

Ground

1'
2'
3'
4'
5'
6'
7'
8'
9'
10'

Legend
Sand
Gravel
Clay
Silt
Asphalt
Concrete
Topsoil

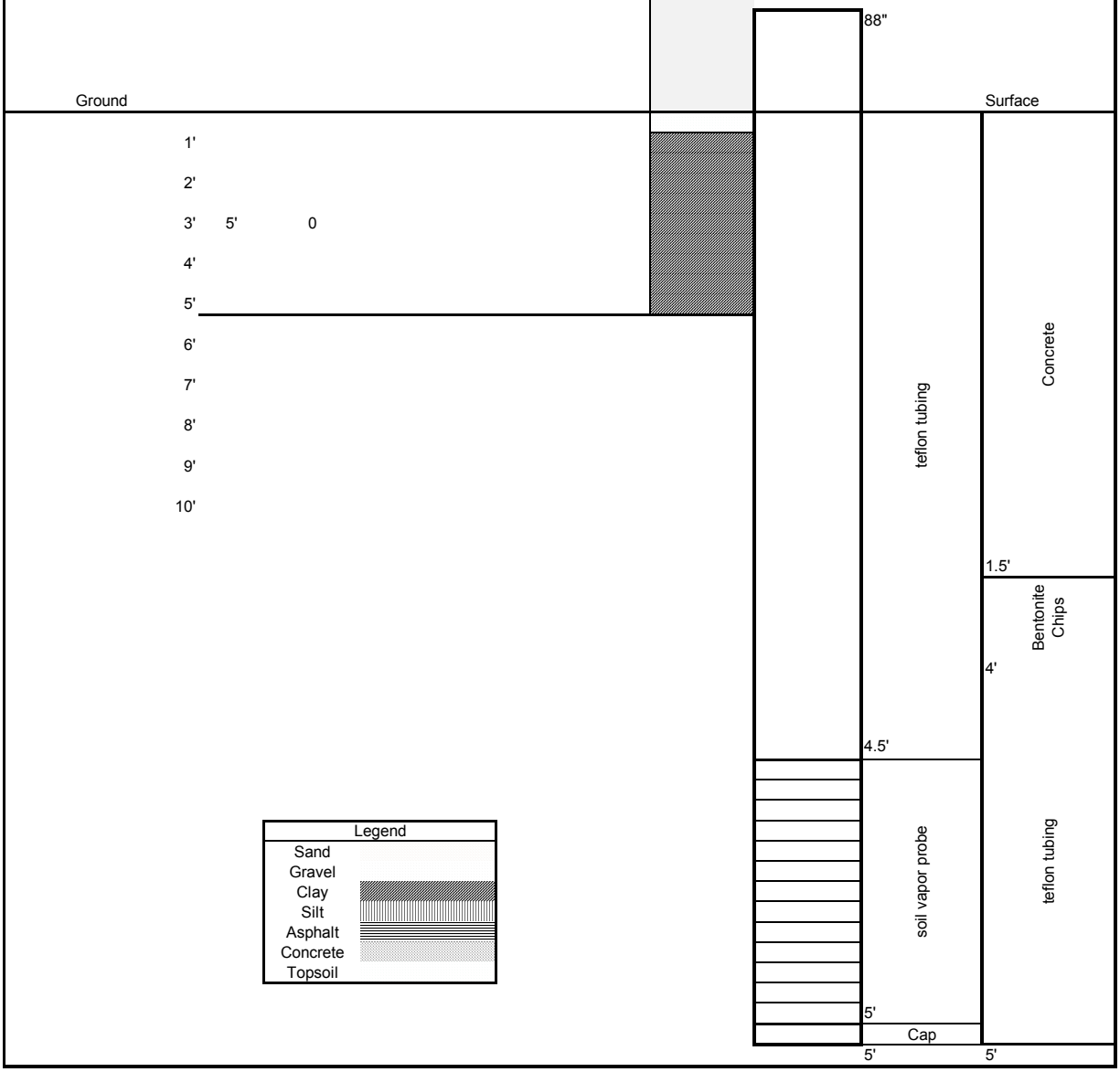
ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Boring ID:	VP-8 (5')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, Michigan
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 9:50 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 14:45 pm
HOIZONTAL DATUM			
Northing:		**Borehole Depth (Feet):**	5'
Easting:		**Borehole Diameter (inches):**	2"
		Depth to Water (Initial):	surface
Ground Elevation (ft):		**Depth to Water (Final):**	

Depth Interval (Ft - bgl)	Primary Geological Unit	Grain Size/ Characteristic	Secondary Geological Unit	Grain Size/ Characteristic	Color	Physical State (i.e., dry, wet)	Comments
0-0.5'	Topsoil	Organic	with trace silty sand		Dark Brown	Wet	No Odor
0.5-5'	Clay	Stiff	with trace Gravel		Brown	Dry	No Odor (with gray silt seam)
EOB @ 5'							

NOTES: Hand auger to 5'
Hand auger 2" diameter.

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Well ID:	VP-8 (5')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, MI
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 9:50 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 14:45 pm
			Well Construction
HOIZONTAL DATUM			Riser: Teflon; Screen: Stainless Steel
Northing:		**Material:**	Teflon / Stainless Steel
Easting:		**Diameter (ID - inch):**	<1" / <1"
		Coupling:	Threaded / Threaded
Ground Elevation:			
Well Casing Elevation:			**Well Development**
Groundwater Depth:		**Method:**	Peristaltic pump
		Duration:	15 minutes
		Gallons Purged:	1-gallon
Comments:			

Recovery (ft)	PID Reading (ppm)	Lab Sample	Blow Counts
5'	0		



ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Boring ID:	VP-8 (8')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, Michigan
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 9:50 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 14:45 pm
HOIZONTAL DATUM			
Northing:		**Borehole Depth (Feet):**	8'
Easting:		**Borehole Diameter (inches):**	2"
		Depth to Water (Initial):	surface
Ground Elevation (ft):		**Depth to Water (Final):**	

Depth Interval (Ft - bgl)	Primary Geological Unit	Grain Size/ Characteristic	Secondary Geological Unit	Grain Size/ Characteristic	Color	Physical State (i.e., dry, wet)	Comments
0-0.5'	Topsoil	Organic	with trace silty sand		Dark Brown	Wet	No Odor
0.5-8'	Clay	Stiff	with trace Gravel		Brown	Dry	No Odor (with gray silt seam)
EOB @ 8'							

NOTES: Hand auger to 8'
Hand auger 2" diameter.

ERM	**ERM Office:** Holland, Michigan 3352 128th Avenue Holland, MI 49424	**PROJECT:**	GE Riverview
		Well ID:	VP-8 (8')
Site Location/Address:	18075 Krause Street Riverview, Michigan	**ERM Project Number:**	0442424
Drilling Contractor:	Terra Probe Environmental, Ottawa, Michigan		
		ERM Representative:	Dan Rusiecki
Drilling Foreman:	Doug Perry	**Office Location:**	Holland, MI
Drilling Method:	Geoprobe - Push/Hand Auger		
Drilling Equipment:	Hand Auger / ATV 6610	**Date Started:**	03/06/2018 @ 9:50 am
Soil Cuttings Management:	Placed on ground near boring	**Date Finished:**	03/06/2018 @ 14:45 pm

			Well Construction	
HOIZONTAL DATUM			Riser	Screen
Northing:		**Material:**	Teflon	Stainless Steel
Easting:		**Diameter (ID - inch):**	<1"	<1"
		Coupling:	Threaded	Threaded
Ground Elevation:				
Well Casing Elevation:			**Well Development**	
Groundwater Depth:		**Method:**	Peristaltic pump	
		Duration:	15 minutes	
		Gallons Purged:	1-gallon	
Comments:				

Recovery (ft)	PID Reading (ppm)	Lab Sample	Blow Counts	Graphic Log	Well Construction	Well Material Demention	Bore Hole Fill
						73" Riser	
Ground							Surface
	0					teflon tubing	Concrete
8'							2'
							Bentonite Chips
							7'
						7.5'	
						soil vapor probe	Filter Sand
						8'	
						Cap	
						8'	8'

1'
2'
3'
4'
5'
6'
7'
8'
9'
10'

Legend
Sand
Gravel
Clay
Silt
Asphalt
Concrete
Topsoil

Laboratory Analytical Reports

05-Feb-2018

Dan Rusiecki
ERM, Inc
3352 128th Avenue
Holland, MI 49424

Re: **GE Riverview (0442424)** Work Order: **18011389**

Dear Dan,

ALS Environmental received 6 samples on 29-Jan-2018 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 34.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager

Certificate No: MN 998501

ALS Group, USA

Date: 05-Feb-18

Client: ERM, Inc
Project: GE Riverview (0442424)
Work Order: **18011389**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
18011389-01	VP-1	Groundwater		01/24/18 15:20	01/29/18 09:00	☐
18011389-02	VP-2	Groundwater		01/24/18 15:50	01/29/18 09:00	☐
18011389-03	VP-6	Groundwater		01/24/18 16:25	01/29/18 09:00	☐
18011389-04	VP-4	Groundwater		01/24/18 17:20	01/29/18 09:00	☐
18011389-05	VP-3	Groundwater		01/25/18 08:35	01/29/18 09:00	☐
18011389-06	VP-5	Groundwater		01/25/18 08:50	01/29/18 09:00	☐

ALS Group, USA

Date: 05-Feb-18

Client: ERM, Inc
Project: GE Riverview (0442424)
WorkOrder: **18011389**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
mg/L	Milligrams per Liter

ALS Group, USA

Date: 05-Feb-18

Client: ERM, Inc
Project: GE Riverview (0442424)
Work Order: 18011389

Case Narrative

Samples for the above noted Work Order were received on 01/29/18. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
Batch R229204a, Method VOC_8260_W, Sample 18011389-03A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be considered estimated for Methyl iodide.

Batch R229204a, Method VOC_8260_W, Sample 18011389-03A MSD: The MSD recovery was above the upper control limit. The corresponding results in the parent sample were non-detect, therefore no qualification is necessary for Ethylbenzene and n-Propylbenzene.

No other deviations or anomalies were noted.

ALS Group, USA

Date: *05-Feb-18*

Client: ERM, Inc
Project: GE Riverview (0442424)
Work Order: 18011389
Sample ID: VP-1
Lab ID: 18011389-01
Collection Date: 01/24/18 03:20 PM
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,1,1-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,1,2,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,1,2-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,1,2-Trichlorotrifluoroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,1-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,1-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2,3-Trichloropropane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2,4-Trichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2-Dibromo-3-chloropropane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2-Dibromoethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,2-Dichloropropane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,3-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
1,4-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
2-Butanone	ND		0.0050	mg/L	1	02/01/18 06:09 AM
2-Hexanone	ND		0.0050	mg/L	1	02/01/18 06:09 AM
2-Methylnaphthalene	ND		0.0050	mg/L	1	02/01/18 06:09 AM
4-Methyl-2-pentanone	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Acetone	**0.010**		**0.010**	**mg/L**	1	02/01/18 06:09 AM
Acrylonitrile	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Benzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Bromochloromethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Bromodichloromethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Bromoform	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Bromomethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Carbon disulfide	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Carbon tetrachloride	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Chlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Chloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Chloroform	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Chloromethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
cis-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
cis-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Dibromochloromethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Dibromomethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-1 **Lab ID:** 18011389-01
Collection Date: 01/24/18 03:20 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Diethyl ether	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Ethylbenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Hexachloroethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Isopropylbenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
m,p-Xylene	ND		0.0020	mg/L	1	02/01/18 06:09 AM
Methyl iodide	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Methyl tert-butyl ether	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Methylene chloride	ND		0.0050	mg/L	1	02/01/18 06:09 AM
Naphthalene	ND		0.0050	mg/L	1	02/01/18 06:09 AM
n-Propylbenzene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
o-Xylene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Styrene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Tetrachloroethene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Toluene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
trans-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
trans-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
trans-1,4-Dichloro-2-butene	ND		0.0020	mg/L	1	02/01/18 06:09 AM
Trichloroethene	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Trichlorofluoromethane	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Vinyl acetate	ND		0.0050	mg/L	1	02/01/18 06:09 AM
Vinyl chloride	ND		0.0010	mg/L	1	02/01/18 06:09 AM
Xylenes, Total	ND		0.0030	mg/L	1	02/01/18 06:09 AM
Surr: 1,2-Dichloroethane-d4	*105*		*75-120*	*%REC*	1	02/01/18 06:09 AM
Surr: 4-Bromofluorobenzene	*95.7*		*80-110*	*%REC*	1	02/01/18 06:09 AM
Surr: Dibromofluoromethane	*99.1*		*85-115*	*%REC*	1	02/01/18 06:09 AM
Surr: Toluene-d8	*98.2*		*85-110*	*%REC*	1	02/01/18 06:09 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-2 **Lab ID:** 18011389-02
Collection Date: 01/24/18 03:50 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,1,1-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,1,2,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,1,2-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,1,2-Trichlorotrifluoroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,1-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,1-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2,3-Trichloropropane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2,4-Trichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2-Dibromo-3-chloropropane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2-Dibromoethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,2-Dichloropropane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,3-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
1,4-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
2-Butanone	ND		0.0050	mg/L	1	02/01/18 06:34 AM
2-Hexanone	ND		0.0050	mg/L	1	02/01/18 06:34 AM
2-Methylnaphthalene	ND		0.0050	mg/L	1	02/01/18 06:34 AM
4-Methyl-2-pentanone	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Acetone	ND		0.010	mg/L	1	02/01/18 06:34 AM
Acrylonitrile	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Benzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Bromochloromethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Bromodichloromethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Bromoform	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Bromomethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Carbon disulfide	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Carbon tetrachloride	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Chlorobenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Chloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Chloroform	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Chloromethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
cis-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
cis-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Dibromochloromethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Dibromomethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-2 **Lab ID:** 18011389-02
Collection Date: 01/24/18 03:50 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Diethyl ether	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Ethylbenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Hexachloroethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Isopropylbenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
m,p-Xylene	ND		0.0020	mg/L	1	02/01/18 06:34 AM
Methyl iodide	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Methyl tert-butyl ether	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Methylene chloride	ND		0.0050	mg/L	1	02/01/18 06:34 AM
Naphthalene	ND		0.0050	mg/L	1	02/01/18 06:34 AM
n-Propylbenzene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
o-Xylene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Styrene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Tetrachloroethene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Toluene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
trans-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
trans-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
trans-1,4-Dichloro-2-butene	ND		0.0020	mg/L	1	02/01/18 06:34 AM
Trichloroethene	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Trichlorofluoromethane	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Vinyl acetate	ND		0.0050	mg/L	1	02/01/18 06:34 AM
Vinyl chloride	ND		0.0010	mg/L	1	02/01/18 06:34 AM
Xylenes, Total	ND		0.0030	mg/L	1	02/01/18 06:34 AM
Surr: 1,2-Dichloroethane-d4	*102*		*75-120*	*%REC*	1	02/01/18 06:34 AM
Surr: 4-Bromofluorobenzene	*98.8*		*80-110*	*%REC*	1	02/01/18 06:34 AM
Surr: Dibromofluoromethane	*100*		*85-115*	*%REC*	1	02/01/18 06:34 AM
Surr: Toluene-d8	*98.9*		*85-110*	*%REC*	1	02/01/18 06:34 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-6 **Lab ID:** 18011389-03
Collection Date: 01/24/18 04:25 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,1,1-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,1,2,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,1,2-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,1,2-Trichlorotrifluoroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,1-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,1-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2,3-Trichloropropane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2,4-Trichlorobenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2-Dibromo-3-chloropropane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2-Dibromoethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,2-Dichloropropane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,3-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
1,4-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
2-Butanone	ND		0.0050	mg/L	1	02/01/18 04:20 PM
2-Hexanone	ND		0.0050	mg/L	1	02/01/18 04:20 PM
2-Methylnaphthalene	ND		0.0050	mg/L	1	02/01/18 04:20 PM
4-Methyl-2-pentanone	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Acetone	**0.027**		**0.010**	**mg/L**	1	02/01/18 04:20 PM
Acrylonitrile	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Benzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Bromochloromethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Bromodichloromethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Bromoform	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Bromomethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Carbon disulfide	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Carbon tetrachloride	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Chlorobenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Chloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Chloroform	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Chloromethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
cis-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
cis-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Dibromochloromethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Dibromomethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-6 **Lab ID:** 18011389-03
Collection Date: 01/24/18 04:25 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Diethyl ether	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Ethylbenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Hexachloroethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Isopropylbenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
m,p-Xylene	ND		0.0020	mg/L	1	02/01/18 04:20 PM
Methyl iodide	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Methyl tert-butyl ether	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Methylene chloride	ND		0.0050	mg/L	1	02/01/18 04:20 PM
Naphthalene	ND		0.0050	mg/L	1	02/01/18 04:20 PM
n-Propylbenzene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
o-Xylene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Styrene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Tetrachloroethene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Toluene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
trans-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
trans-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
trans-1,4-Dichloro-2-butene	ND		0.0020	mg/L	1	02/01/18 04:20 PM
Trichloroethene	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Trichlorofluoromethane	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Vinyl acetate	ND		0.0050	mg/L	1	02/01/18 04:20 PM
Vinyl chloride	ND		0.0010	mg/L	1	02/01/18 04:20 PM
Xylenes, Total	ND		0.0030	mg/L	1	02/01/18 04:20 PM
Surr: 1,2-Dichloroethane-d4	*104*		*75-120*	*%REC*	1	02/01/18 04:20 PM
Surr: 4-Bromofluorobenzene	*98.4*		*80-110*	*%REC*	1	02/01/18 04:20 PM
Surr: Dibromofluoromethane	*99.4*		*85-115*	*%REC*	1	02/01/18 04:20 PM
Surr: Toluene-d8	*97.6*		*85-110*	*%REC*	1	02/01/18 04:20 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-4 **Lab ID:** 18011389-04
Collection Date: 01/24/18 05:20 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,1,1-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,1,2,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,1,2-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,1,2-Trichlorotrifluoroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,1-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,1-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2,3-Trichloropropane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2,4-Trichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2-Dibromo-3-chloropropane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2-Dibromoethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,2-Dichloropropane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,3-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
1,4-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
2-Butanone	ND		0.0050	mg/L	1	02/01/18 07:24 AM
2-Hexanone	ND		0.0050	mg/L	1	02/01/18 07:24 AM
2-Methylnaphthalene	ND		0.0050	mg/L	1	02/01/18 07:24 AM
4-Methyl-2-pentanone	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Acetone	ND		0.010	mg/L	1	02/01/18 07:24 AM
Acrylonitrile	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Benzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Bromochloromethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Bromodichloromethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Bromoform	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Bromomethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Carbon disulfide	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Carbon tetrachloride	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Chlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Chloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Chloroform	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Chloromethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
cis-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
cis-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Dibromochloromethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Dibromomethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-4 **Lab ID:** 18011389-04
Collection Date: 01/24/18 05:20 PM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Diethyl ether	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Ethylbenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Hexachloroethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Isopropylbenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
m,p-Xylene	ND		0.0020	mg/L	1	02/01/18 07:24 AM
Methyl iodide	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Methyl tert-butyl ether	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Methylene chloride	ND		0.0050	mg/L	1	02/01/18 07:24 AM
Naphthalene	ND		0.0050	mg/L	1	02/01/18 07:24 AM
n-Propylbenzene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
o-Xylene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Styrene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Tetrachloroethene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Toluene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
trans-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
trans-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
trans-1,4-Dichloro-2-butene	ND		0.0020	mg/L	1	02/01/18 07:24 AM
Trichloroethene	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Trichlorofluoromethane	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Vinyl acetate	ND		0.0050	mg/L	1	02/01/18 07:24 AM
Vinyl chloride	ND		0.0010	mg/L	1	02/01/18 07:24 AM
Xylenes, Total	ND		0.0030	mg/L	1	02/01/18 07:24 AM
Surr: 1,2-Dichloroethane-d4	*102*		*75-120*	*%REC*	1	02/01/18 07:24 AM
Surr: 4-Bromofluorobenzene	*96.6*		*80-110*	*%REC*	1	02/01/18 07:24 AM
Surr: Dibromofluoromethane	*99.2*		*85-115*	*%REC*	1	02/01/18 07:24 AM
Surr: Toluene-d8	*98.6*		*85-110*	*%REC*	1	02/01/18 07:24 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-3 **Lab ID:** 18011389-05
Collection Date: 01/25/18 08:35 AM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,1,1-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,1,2,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,1,2-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,1,2-Trichlorotrifluoroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,1-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,1-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2,3-Trichloropropane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2,4-Trichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2-Dibromo-3-chloropropane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2-Dibromoethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,2-Dichloropropane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,3-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
1,4-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
2-Butanone	ND		0.0050	mg/L	1	02/01/18 07:49 AM
2-Hexanone	ND		0.0050	mg/L	1	02/01/18 07:49 AM
2-Methylnaphthalene	ND		0.0050	mg/L	1	02/01/18 07:49 AM
4-Methyl-2-pentanone	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Acetone	ND		0.010	mg/L	1	02/01/18 07:49 AM
Acrylonitrile	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Benzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Bromochloromethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Bromodichloromethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Bromoform	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Bromomethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Carbon disulfide	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Carbon tetrachloride	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Chlorobenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Chloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Chloroform	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Chloromethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
cis-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
cis-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Dibromochloromethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Dibromomethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-3 **Lab ID:** 18011389-05
Collection Date: 01/25/18 08:35 AM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Diethyl ether	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Ethylbenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Hexachloroethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Isopropylbenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
m,p-Xylene	ND		0.0020	mg/L	1	02/01/18 07:49 AM
Methyl iodide	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Methyl tert-butyl ether	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Methylene chloride	ND		0.0050	mg/L	1	02/01/18 07:49 AM
Naphthalene	ND		0.0050	mg/L	1	02/01/18 07:49 AM
n-Propylbenzene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
o-Xylene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Styrene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Tetrachloroethene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Toluene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
trans-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
trans-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
trans-1,4-Dichloro-2-butene	ND		0.0020	mg/L	1	02/01/18 07:49 AM
Trichloroethene	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Trichlorofluoromethane	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Vinyl acetate	ND		0.0050	mg/L	1	02/01/18 07:49 AM
Vinyl chloride	ND		0.0010	mg/L	1	02/01/18 07:49 AM
Xylenes, Total	ND		0.0030	mg/L	1	02/01/18 07:49 AM
Surr: 1,2-Dichloroethane-d4	*104*		*75-120*	*%REC*	1	02/01/18 07:49 AM
Surr: 4-Bromofluorobenzene	*95.4*		*80-110*	*%REC*	1	02/01/18 07:49 AM
Surr: Dibromofluoromethane	*100*		*85-115*	*%REC*	1	02/01/18 07:49 AM
Surr: Toluene-d8	*98.2*		*85-110*	*%REC*	1	02/01/18 07:49 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-5 **Lab ID:** 18011389-06
Collection Date: 01/25/18 08:50 AM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,1,1-Trichloroethane	**0.0056**		**0.0010**	**mg/L**	1	02/01/18 08:15 AM
1,1,2,2-Tetrachloroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,1,2-Trichloroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,1,2-Trichlorotrifluoroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,1-Dichloroethane	**0.0055**		**0.0010**	**mg/L**	1	02/01/18 08:15 AM
1,1-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2,3-Trichloropropane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2,4-Trichlorobenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2-Dibromo-3-chloropropane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2-Dibromoethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2-Dichloroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,2-Dichloropropane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,3-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
1,4-Dichlorobenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
2-Butanone	ND		0.0050	mg/L	1	02/01/18 08:15 AM
2-Hexanone	ND		0.0050	mg/L	1	02/01/18 08:15 AM
2-Methylnaphthalene	ND		0.0050	mg/L	1	02/01/18 08:15 AM
4-Methyl-2-pentanone	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Acetone	ND		0.010	mg/L	1	02/01/18 08:15 AM
Acrylonitrile	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Benzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Bromochloromethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Bromodichloromethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Bromoform	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Bromomethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Carbon disulfide	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Carbon tetrachloride	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Chlorobenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Chloroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Chloroform	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Chloromethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
cis-1,2-Dichloroethene	**0.0037**		**0.0010**	**mg/L**	1	02/01/18 08:15 AM
cis-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Dibromochloromethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Dibromomethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 18011389
Sample ID: VP-5 **Lab ID:** 18011389-06
Collection Date: 01/25/18 08:50 AM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Diethyl ether	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Ethylbenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Hexachloroethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Isopropylbenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
m,p-Xylene	ND		0.0020	mg/L	1	02/01/18 08:15 AM
Methyl iodide	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Methyl tert-butyl ether	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Methylene chloride	ND		0.0050	mg/L	1	02/01/18 08:15 AM
Naphthalene	ND		0.0050	mg/L	1	02/01/18 08:15 AM
n-Propylbenzene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
o-Xylene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Styrene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Tetrachloroethene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Toluene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
trans-1,2-Dichloroethene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
trans-1,3-Dichloropropene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
trans-1,4-Dichloro-2-butene	ND		0.0020	mg/L	1	02/01/18 08:15 AM
Trichloroethene	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Trichlorofluoromethane	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Vinyl acetate	ND		0.0050	mg/L	1	02/01/18 08:15 AM
Vinyl chloride	ND		0.0010	mg/L	1	02/01/18 08:15 AM
Xylenes, Total	ND		0.0030	mg/L	1	02/01/18 08:15 AM
Surr: 1,2-Dichloroethane-d4	*104*		*75-120*	*%REC*	1	02/01/18 08:15 AM
Surr: 4-Bromofluorobenzene	*96.2*		*80-110*	*%REC*	1	02/01/18 08:15 AM
Surr: Dibromofluoromethane	*100*		*85-115*	*%REC*	1	02/01/18 08:15 AM
Surr: Toluene-d8	*98.8*		*85-110*	*%REC*	1	02/01/18 08:15 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **R229204a** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: **VBLKW2-180131-R229204a** Units: **µg/L** Analysis Date: **01/31/18 11:52 PM**

Client ID: Run ID: **VMS6_180131A** SeqNo: **4873042** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1,2-Trichlorotrifluoroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	1.0								
1,2-Dibromoethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Acrylonitrile	ND	1.0								
Benzene	ND	1.0								
Bromochloromethane	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
Diethyl ether	ND	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R229204a**	Instrument ID **VMS6**		Method: **SW8260B**					
Ethylbenzene	ND	1.0						
Hexachloroethane	ND	1.0						
Isopropylbenzene	ND	1.0						
m,p-Xylene	ND	2.0						
Methyl iodide	ND	1.0						
Methyl tert-butyl ether	ND	1.0						
Methylene chloride	ND	5.0						
Naphthalene	0.93	5.0						J
n-Propylbenzene	ND	1.0						
o-Xylene	ND	1.0						
Styrene	ND	1.0						
Tetrachloroethene	ND	1.0						
Toluene	ND	1.0						
trans-1,2-Dichloroethene	ND	1.0						
trans-1,3-Dichloropropene	ND	1.0						
trans-1,4-Dichloro-2-butene	ND	2.0						
Trichloroethene	ND	1.0						
Trichlorofluoromethane	ND	1.0						
Vinyl acetate	ND	5.0						
Vinyl chloride	ND	1.0						
Xylenes, Total	ND	3.0						
Surr: 1,2-Dichloroethane-d4	*19.81*	0	*20*	0	*99*	*75-120*	0	
Surr: 4-Bromofluorobenzene	*19.89*	0	*20*	0	*99.4*	*80-110*	0	
Surr: Dibromofluoromethane	*19.63*	0	*20*	0	*98.2*	*85-115*	0	
Surr: Toluene-d8	*19.93*	0	*20*	0	*99.6*	*85-110*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229204a** Instrument ID **VMS6** Method: **SW8260B**

LCS Sample ID: **VLCSW3-180131-R229204a** Units: **µg/L** Analysis Date: **01/31/18 11:01 PM**
Client ID: Run ID: **VMS6_180131A** SeqNo: **4873040** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.09	1.0	20	0	100	73-114	0			
1,1,1-Trichloroethane	19.77	1.0	20	0	98.8	75-130	0			
1,1,2,2-Tetrachloroethane	20.1	1.0	20	0	100	75-130	0			
1,1,2-Trichloroethane	19.98	1.0	20	0	99.9	75-125	0			
1,1-Dichloroethane	19.49	1.0	20	0	97.4	75-133	0			
1,1-Dichloroethene	20.65	1.0	20	0	103	70-145	0			
1,2,3-Trichloropropane	18.72	1.0	20	0	93.6	75-125	0			
1,2,4-Trichlorobenzene	18.91	1.0	20	0	94.6	70-135	0			
1,2,4-Trimethylbenzene	19.2	1.0	20	0	96	75-130	0			
1,2-Dibromo-3-chloropropane	19.17	1.0	20	0	95.8	60-130	0			
1,2-Dibromoethane	20.14	1.0	20	0	101	67-155	0			
1,2-Dichlorobenzene	19.36	1.0	20	0	96.8	70-130	0			
1,2-Dichloroethane	19.39	1.0	20	0	97	78-125	0			
1,2-Dichloropropane	19.62	1.0	20	0	98.1	75-125	0			
1,3,5-Trimethylbenzene	20	1.0	20	0	100	75-130	0			
1,3-Dichlorobenzene	19.23	1.0	20	0	96.2	75-130	0			
1,4-Dichlorobenzene	19.09	1.0	20	0	95.4	75-130	0			
2-Butanone	17.43	5.0	20	0	87.2	55-150	0			
2-Hexanone	17.74	5.0	20	0	88.7	60-135	0			
4-Methyl-2-pentanone	23.12	1.0	20	0	116	77-178	0			
Acetone	16.52	10	20	0	82.6	60-160	0			
Acrylonitrile	16.77	1.0	20	0	83.8	60-140	0			
Benzene	19.56	1.0	20	0	97.8	85-125	0			
Bromochloromethane	20.45	1.0	20	0	102	72-141	0			
Bromodichloromethane	19.77	1.0	20	0	98.8	75-125	0			
Bromoform	18.29	1.0	20	0	91.4	60-125	0			
Bromomethane	23.37	1.0	20	0	117	30-185	0			
Carbon disulfide	19.61	1.0	20	0	98	60-165	0			
Carbon tetrachloride	19.1	1.0	20	0	95.5	65-140	0			
Chlorobenzene	19.4	1.0	20	0	97	80-120	0			
Chloroethane	16.57	1.0	20	0	82.8	50-140	0			
Chloroform	19.25	1.0	20	0	96.2	80-130	0			
Chloromethane	17.5	1.0	20	0	87.5	46-148	0			
cis-1,2-Dichloroethene	18.32	1.0	20	0	91.6	75-134	0			
cis-1,3-Dichloropropene	19.58	1.0	20	0	97.9	70-130	0			
Dibromochloromethane	18.46	1.0	20	0	92.3	60-115	0			
Dibromomethane	18.86	1.0	20	0	94.3	85-125	0			
Dichlorodifluoromethane	12.11	1.0	20	0	60.6	20-120	0			
Diethyl ether	19.22	1.0	20	0	96.1	70-130	0			
Ethylbenzene	19.35	1.0	20	0	96.8	78-113	0			
Hexachloroethane	18.05	1.0	20	0	90.2	50-124	0			
Isopropylbenzene	19.71	1.0	20	0	98.6	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R229204a** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	36.88	2.0	40	0	92.2	75-130	0
Methyl iodide	20.56	1.0	20	0	103	60-160	0
Methyl tert-butyl ether	17.89	1.0	20	0	89.4	68-129	0
Methylene chloride	19.64	5.0	20	0	98.2	75-140	0
Naphthalene	18.13	5.0	20	0	90.6	55-160	0
n-Propylbenzene	19.63	1.0	20	0	98.2	76-116	0
o-Xylene	18.6	1.0	20	0	93	80-125	0
Styrene	18.43	1.0	20	0	92.2	83-137	0
Tetrachloroethene	19.4	1.0	20	0	97	68-166	0
Toluene	19.07	1.0	20	0	95.4	85-125	0
trans-1,2-Dichloroethene	19.52	1.0	20	0	97.6	80-140	0
trans-1,3-Dichloropropene	18.85	1.0	20	0	94.2	56-132	0
trans-1,4-Dichloro-2-butene	14.43	2.0	20	0	72.2	46-118	0
Trichloroethene	19.4	1.0	20	0	97	84-130	0
Trichlorofluoromethane	15.8	1.0	20	0	79	60-140	0
Vinyl chloride	16.32	1.0	20	0	81.6	50-136	0
Xylenes, Total	55.48	3.0	60	0	92.5	80-126	0
Surr: 1,2-Dichloroethane-d4	*19.78*	0	*20*	0	*98.9*	*75-120*	0
Surr: 4-Bromofluorobenzene	*19.96*	0	*20*	0	*99.8*	*80-110*	0
Surr: Dibromofluoromethane	*20.15*	0	*20*	0	*101*	*85-115*	0
Surr: Toluene-d8	*19.98*	0	*20*	0	*99.9*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229204a** Instrument ID **VMS6** Method: **SW8260B**

MS Sample ID: **18011389-03A MS** Units: **µg/L** Analysis Date: **02/01/18 08:40 AM**
Client ID: **VP-6** Run ID: **VMS6_180131A** SeqNo: **4873055** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	215.2	10	200	0	108	73-114	0			
1,1,1-Trichloroethane	240.2	10	200	0	120	75-130	0			
1,1,2,2-Tetrachloroethane	209.2	10	200	0	105	75-130	0			
1,1,2-Trichloroethane	213.5	10	200	0	107	75-125	0			
1,1-Dichloroethane	229.8	10	200	0	115	75-133	0			
1,1-Dichloroethene	260.8	10	200	0	130	70-145	0			
1,2,3-Trichloropropane	198.7	10	200	0	99.4	75-125	0			
1,2,4-Trichlorobenzene	184.7	10	200	0	92.4	70-135	0			
1,2,4-Trimethylbenzene	209.8	10	200	0	105	75-130	0			
1,2-Dibromo-3-chloropropane	180.7	10	200	0	90.4	60-130	0			
1,2-Dibromoethane	209	10	200	0	104	67-155	0			
1,2-Dichlorobenzene	197.7	10	200	0	98.8	70-130	0			
1,2-Dichloroethane	208.7	10	200	0	104	78-125	0			
1,2-Dichloropropane	208.6	10	200	0	104	75-125	0			
1,3,5-Trimethylbenzene	220.5	10	200	0	110	75-130	0			
1,3-Dichlorobenzene	198.9	10	200	0	99.4	75-130	0			
1,4-Dichlorobenzene	197.7	10	200	0	98.8	75-130	0			
2-Butanone	202.2	50	200	0	101	55-150	0			
2-Hexanone	188.1	50	200	0	94	60-135	0			
4-Methyl-2-pentanone	254.8	10	200	0	127	77-178	0			
Acetone	284.8	100	200	67.8	108	60-160	0			
Acrylonitrile	177.7	10	200	0	88.8	60-140	0			
Benzene	220.5	10	200	0	110	85-125	0			
Bromochloromethane	226.1	10	200	0	113	72-141	0			
Bromodichloromethane	207.1	10	200	0	104	75-125	0			
Bromoform	180	10	200	0	90	60-125	0			
Bromomethane	230.9	10	200	0	115	30-185	0			
Carbon disulfide	238.8	10	200	0	119	60-165	0			
Carbon tetrachloride	239.1	10	200	0	120	65-140	0			
Chlorobenzene	211.8	10	200	0	106	80-120	0			
Chloroethane	196.5	10	200	0	98.2	50-140	0			
Chloroform	220	10	200	0	110	80-130	0			
Chloromethane	171.4	10	200	0	85.7	46-148	0			
cis-1,2-Dichloroethene	209.8	10	200	0	105	75-134	0			
cis-1,3-Dichloropropene	187.8	10	200	0	93.9	70-130	0			
Dibromochloromethane	193.8	10	200	0	96.9	60-115	0			
Dibromomethane	202.5	10	200	0	101	85-125	0			
Dichlorodifluoromethane	190.9	10	200	0	95.4	20-120	0			
Diethyl ether	201.4	10	200	0	101	70-130	0			
Ethylbenzene	218.4	10	200	0	109	78-113	0			
Hexachloroethane	183.5	10	200	0	91.8	50-124	0			
Isopropylbenzene	224.2	10	200	0	112	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R229204a**	Instrument ID **VMS6**		Method: **SW8260B**				
m,p-Xylene	413.6	20	400	0	103	75-130	0
Methyl iodide	149.2	10	200	0	74.6	60-160	0
Methyl tert-butyl ether	195.7	10	200	0	97.8	68-129	0
Methylene chloride	216.7	50	200	0	108	75-140	0
Naphthalene	173.1	50	200	0	86.6	55-160	0
n-Propylbenzene	220	10	200	0	110	76-116	0
o-Xylene	203.3	10	200	0	102	80-125	0
Styrene	198.2	10	200	0	99.1	83-137	0
Tetrachloroethene	235.5	10	200	0	118	68-166	0
Toluene	216.9	10	200	0	108	85-125	0
trans-1,2-Dichloroethene	230.7	10	200	0	115	80-140	0
trans-1,3-Dichloropropene	186.3	10	200	0	93.2	56-132	0
trans-1,4-Dichloro-2-butene	97.9	20	200	0	49	46-118	0
Trichloroethene	224.1	10	200	0	112	84-130	0
Trichlorofluoromethane	221	10	200	0	110	60-140	0
Vinyl chloride	199.4	10	200	0	99.7	50-136	0
Xylenes, Total	616.9	30	600	0	103	80-126	0
Surr: 1,2-Dichloroethane-d4	*201.7*	0	*200*	0	*101*	*75-120*	0
Surr: 4-Bromofluorobenzene	*198.3*	0	*200*	0	*99.2*	*80-110*	0
Surr: Dibromofluoromethane	*202.7*	0	*200*	0	*101*	*85-115*	0
Surr: Toluene-d8	*200.7*	0	*200*	0	*100*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229204a** Instrument ID **VMS6** Method: **SW8260B**

MSD Sample ID: **18011389-03A MSD** Units: **µg/L** Analysis Date: **02/01/18 09:05 AM**
Client ID: **VP-6** Run ID: **VMS6_180131A** SeqNo: **4873057** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	226.4	10	200	0	113	73-114	215.2	5.07	30	
1,1,1-Trichloroethane	253.4	10	200	0	127	75-130	240.2	5.35	30	
1,1,2,2-Tetrachloroethane	226.8	10	200	0	113	75-130	209.2	8.07	30	
1,1,2-Trichloroethane	219.6	10	200	0	110	75-125	213.5	2.82	30	
1,1-Dichloroethane	241.4	10	200	0	121	75-133	229.8	4.92	30	
1,1-Dichloroethene	275.3	10	200	0	138	70-145	260.8	5.41	30	
1,2,3-Trichloropropane	213.8	10	200	0	107	75-125	198.7	7.32	30	
1,2,4-Trichlorobenzene	203.7	10	200	0	102	70-135	184.7	9.78	30	
1,2,4-Trimethylbenzene	221.7	10	200	0	111	75-130	209.8	5.52	30	
1,2-Dibromo-3-chloropropane	212.9	10	200	0	106	60-130	180.7	16.4	30	
1,2-Dibromoethane	222.1	10	200	0	111	67-155	209	6.08	30	
1,2-Dichlorobenzene	216.3	10	200	0	108	70-130	197.7	8.99	30	
1,2-Dichloroethane	224.9	10	200	0	112	78-125	208.7	7.47	30	
1,2-Dichloropropane	219.8	10	200	0	110	75-125	208.6	5.23	30	
1,3,5-Trimethylbenzene	235	10	200	0	118	75-130	220.5	6.37	30	
1,3-Dichlorobenzene	216.1	10	200	0	108	75-130	198.9	8.29	30	
1,4-Dichlorobenzene	209.4	10	200	0	105	75-130	197.7	5.75	30	
2-Butanone	209.1	50	200	0	105	55-150	202.2	3.36	30	
2-Hexanone	206.5	50	200	0	103	60-135	188.1	9.33	30	
4-Methyl-2-pentanone	272.6	10	200	0	136	77-178	254.8	6.75	30	
Acetone	310.1	100	200	67.8	121	60-160	284.8	8.51	30	
Acrylonitrile	199.1	10	200	0	99.6	60-140	177.7	11.4	30	
Benzene	235.2	10	200	0	118	85-125	220.5	6.45	30	
Bromochloromethane	234.5	10	200	0	117	72-141	226.1	3.65	30	
Bromodichloromethane	224.6	10	200	0	112	75-125	207.1	8.11	30	
Bromoform	199.8	10	200	0	99.9	60-125	180	10.4	30	
Bromomethane	252.4	10	200	0	126	30-185	230.9	8.9	30	
Carbon disulfide	257.5	10	200	0	129	60-165	238.8	7.54	30	
Carbon tetrachloride	256.1	10	200	0	128	65-140	239.1	6.87	30	
Chlorobenzene	222.5	10	200	0	111	80-120	211.8	4.93	30	
Chloroethane	219.3	10	200	0	110	50-140	196.5	11	30	
Chloroform	229.8	10	200	0	115	80-130	220	4.36	30	
Chloromethane	219.5	10	200	0	110	46-148	171.4	24.6	30	
cis-1,2-Dichloroethene	220.3	10	200	0	110	75-134	209.8	4.88	30	
cis-1,3-Dichloropropene	212.2	10	200	0	106	70-130	187.8	12.2	30	
Dibromochloromethane	203.8	10	200	0	102	60-115	193.8	5.03	30	
Dibromomethane	222.8	10	200	0	111	85-125	202.5	9.55	30	
Dichlorodifluoromethane	195.6	10	200	0	97.8	20-120	190.9	2.43	30	
Diethyl ether	216.1	10	200	0	108	70-130	201.4	7.04	30	
Ethylbenzene	228.9	10	200	0	114	78-113	218.4	4.69	30	S
Hexachloroethane	198.3	10	200	0	99.2	50-124	183.5	7.75	30	
Isopropylbenzene	235	10	200	0	118	80-127	224.2	4.7	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R229204a** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	433.1	20	400	0	108	75-130	413.6	4.61	30	
Methyl iodide	213.5	10	200	0	107	60-160	149.2	35.5	30	R
Methyl tert-butyl ether	207	10	200	0	104	68-129	195.7	5.61	30	
Methylene chloride	234.2	50	200	0	117	75-140	216.7	7.76	30	
Naphthalene	197.9	50	200	0	99	55-160	173.1	13.4	30	
n-Propylbenzene	234.3	10	200	0	117	76-116	220	6.3	30	S
o-Xylene	214	10	200	0	107	80-125	203.3	5.13	30	
Styrene	208.6	10	200	0	104	83-137	198.2	5.11	30	
Tetrachloroethene	241.8	10	200	0	121	68-166	235.5	2.64	30	
Toluene	223.4	10	200	0	112	85-125	216.9	2.95	30	
trans-1,2-Dichloroethene	245.7	10	200	0	123	80-140	230.7	6.3	30	
trans-1,3-Dichloropropene	197.9	10	200	0	99	56-132	186.3	6.04	30	
trans-1,4-Dichloro-2-butene	110.8	20	200	0	55.4	46-118	97.9	12.4	30	
Trichloroethene	240.4	10	200	0	120	84-130	224.1	7.02	30	
Trichlorofluoromethane	227.5	10	200	0	114	60-140	221	2.9	30	
Vinyl chloride	214.7	10	200	0	107	50-136	199.4	7.39	30	
Xylenes, Total	647.1	30	600	0	108	80-126	616.9	4.78	30	
Surr: 1,2-Dichloroethane-d4	*202.3*	0	*200*	0	*101*	*75-120*	201.7	*0.297*	*30*	
Surr: 4-Bromofluorobenzene	*203.1*	0	*200*	0	*102*	*80-110*	198.3	*2.39*	*30*	
Surr: Dibromofluoromethane	*204.1*	0	*200*	0	*102*	*85-115*	202.7	*0.688*	*30*	
Surr: Toluene-d8	*195.6*	0	*200*	0	*97.8*	*85-110*	200.7	*2.57*	*30*	

The following samples were analyzed in this batch:

18011389-01A	18011389-02A	18011389-03A
18011389-04A	18011389-05A	18011389-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: **VBLKW1-180201-R229256** Units: **µg/L** Analysis Date: **02/01/18 12:59 PM**
Client ID: Run ID: **VMS6_180201A** SeqNo: **4874276** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1,2-Trichlorotrifluoroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	1.0								
1,2-Dibromoethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	1.65	10								J
Acrylonitrile	ND	1.0								
Benzene	ND	1.0								
Bromochloromethane	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
Diethyl ether	ND	1.0								
Ethylbenzene	ND	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R229256**	Instrument ID **VMS6**		Method: **SW8260B**				
Hexachloroethane	ND	1.0					
Isopropylbenzene	ND	1.0					
m,p-Xylene	ND	2.0					
Methyl iodide	ND	1.0					
Methyl tert-butyl ether	ND	1.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Propylbenzene	ND	1.0					
o-Xylene	ND	1.0					
Styrene	ND	1.0					
Tetrachloroethene	ND	1.0					
Toluene	ND	1.0					
trans-1,2-Dichloroethene	ND	1.0					
trans-1,3-Dichloropropene	ND	1.0					
trans-1,4-Dichloro-2-butene	ND	2.0					
Trichloroethene	ND	1.0					
Trichlorofluoromethane	ND	1.0					
Vinyl acetate	ND	5.0					
Vinyl chloride	ND	1.0					
Xylenes, Total	ND	3.0					
Surr: 1,2-Dichloroethane-d4	*20.34*	0	*20*	0	*102*	*75-120*	0
Surr: 4-Bromofluorobenzene	*19.6*	0	*20*	0	*98*	*80-110*	0
Surr: Dibromofluoromethane	*20.29*	0	*20*	0	*101*	*85-115*	0
Surr: Toluene-d8	*19.66*	0	*20*	0	*98.3*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

LCS Sample ID: **VLCSW1-180201-R229256** Units: **µg/L** Analysis Date: **02/01/18 11:44 AM**
Client ID: Run ID: **VMS6_180201A** SeqNo: **4874274** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	23.26	1.0	20	0	116	73-114	0			S
1,1,1-Trichloroethane	23.34	1.0	20	0	117	75-130	0			
1,1,2,2-Tetrachloroethane	23.06	1.0	20	0	115	75-130	0			
1,1,2-Trichloroethane	22.65	1.0	20	0	113	75-125	0			
1,1-Dichloroethane	22.88	1.0	20	0	114	75-133	0			
1,1-Dichloroethene	24.32	1.0	20	0	122	70-145	0			
1,2,3-Trichloropropane	22.01	1.0	20	0	110	75-125	0			
1,2,4-Trichlorobenzene	21.75	1.0	20	0	109	70-135	0			
1,2,4-Trimethylbenzene	22.53	1.0	20	0	113	75-130	0			
1,2-Dibromo-3-chloropropane	21.19	1.0	20	0	106	60-130	0			
1,2-Dibromoethane	23.08	1.0	20	0	115	67-155	0			
1,2-Dichlorobenzene	22.19	1.0	20	0	111	70-130	0			
1,2-Dichloroethane	22.46	1.0	20	0	112	78-125	0			
1,2-Dichloropropane	22.29	1.0	20	0	111	75-125	0			
1,3,5-Trimethylbenzene	23.29	1.0	20	0	116	75-130	0			
1,3-Dichlorobenzene	21.68	1.0	20	0	108	75-130	0			
1,4-Dichlorobenzene	21.78	1.0	20	0	109	75-130	0			
2-Butanone	20.23	5.0	20	0	101	55-150	0			
2-Hexanone	20.11	5.0	20	0	101	60-135	0			
4-Methyl-2-pentanone	26.7	1.0	20	0	134	77-178	0			
Acetone	25.19	10	20	0	126	60-160	0			
Acrylonitrile	19.65	1.0	20	0	98.2	60-140	0			
Benzene	22.38	1.0	20	0	112	85-125	0			
Bromochloromethane	23.96	1.0	20	0	120	72-141	0			
Bromodichloromethane	22.29	1.0	20	0	111	75-125	0			
Bromoform	21.41	1.0	20	0	107	60-125	0			
Bromomethane	27.87	1.0	20	0	139	30-185	0			
Carbon disulfide	23.82	1.0	20	0	119	60-165	0			
Carbon tetrachloride	22.9	1.0	20	0	114	65-140	0			
Chlorobenzene	22.2	1.0	20	0	111	80-120	0			
Chloroethane	20.15	1.0	20	0	101	50-140	0			
Chloroform	22.09	1.0	20	0	110	80-130	0			
Chloromethane	21.03	1.0	20	0	105	46-148	0			
cis-1,2-Dichloroethene	22.26	1.0	20	0	111	75-134	0			
cis-1,3-Dichloropropene	22.5	1.0	20	0	112	70-130	0			
Dibromochloromethane	21.86	1.0	20	0	109	60-115	0			
Dibromomethane	21.53	1.0	20	0	108	85-125	0			
Dichlorodifluoromethane	17.89	1.0	20	0	89.4	20-120	0			
Diethyl ether	21.37	1.0	20	0	107	70-130	0			
Ethylbenzene	22.07	1.0	20	0	110	78-113	0			
Hexachloroethane	20.36	1.0	20	0	102	50-124	0			
Isopropylbenzene	22.81	1.0	20	0	114	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	42.63	2.0	40	0	107	75-130	0
Methyl iodide	23.89	1.0	20	0	119	60-160	0
Methyl tert-butyl ether	21.42	1.0	20	0	107	68-129	0
Methylene chloride	22.96	5.0	20	0	115	75-140	0
Naphthalene	20.21	5.0	20	0	101	55-160	0
n-Propylbenzene	22.61	1.0	20	0	113	76-116	0
o-Xylene	21.36	1.0	20	0	107	80-125	0
Styrene	21.43	1.0	20	0	107	83-137	0
Tetrachloroethene	22.7	1.0	20	0	114	68-166	0
Toluene	22.06	1.0	20	0	110	85-125	0
trans-1,2-Dichloroethene	23.27	1.0	20	0	116	80-140	0
trans-1,3-Dichloropropene	21.99	1.0	20	0	110	56-132	0
trans-1,4-Dichloro-2-butene	15.28	2.0	20	0	76.4	46-118	0
Trichloroethene	22.62	1.0	20	0	113	84-130	0
Trichlorofluoromethane	19.89	1.0	20	0	99.4	60-140	0
Vinyl chloride	19.97	1.0	20	0	99.8	50-136	0
Xylenes, Total	63.99	3.0	60	0	107	80-126	0
Surr: 1,2-Dichloroethane-d4	*19.72*	0	*20*	0	*98.6*	*75-120*	0
Surr: 4-Bromofluorobenzene	*20.4*	0	*20*	0	*102*	*80-110*	0
Surr: Dibromofluoromethane	*20.36*	0	*20*	0	*102*	*85-115*	0
Surr: Toluene-d8	*20.12*	0	*20*	0	*101*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

MS	Sample ID: **18011422-03A MS**			Units: **µg/L**			Analysis Date: **02/01/18 09:21 PM**			
Client ID:		Run ID: **VMS6_180201A**		SeqNo: **4875098**		Prep Date:		DF: **100**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	2407	100	2000	0	120	73-114	0			S
1,1,1-Trichloroethane	2612	100	2000	0	131	75-130	0			S
1,1,2,2-Tetrachloroethane	2362	100	2000	0	118	75-130	0			
1,1,2-Trichloroethane	2371	100	2000	0	119	75-125	0			
1,1-Dichloroethane	2453	100	2000	0	123	75-133	0			
1,1-Dichloroethene	2776	100	2000	0	139	70-145	0			
1,2,3-Trichloropropane	2232	100	2000	0	112	75-125	0			
1,2,4-Trichlorobenzene	2142	100	2000	0	107	70-135	0			
1,2,4-Trimethylbenzene	2422	100	2000	68	118	75-130	0			
1,2-Dibromo-3-chloropropane	2008	100	2000	0	100	60-130	0			
1,2-Dibromoethane	2359	100	2000	0	118	67-155	0			
1,2-Dichlorobenzene	2237	100	2000	0	112	70-130	0			
1,2-Dichloroethane	2356	100	2000	0	118	78-125	0			
1,2-Dichloropropane	2303	100	2000	0	115	75-125	0			
1,3,5-Trimethylbenzene	2522	100	2000	27	125	75-130	0			
1,3-Dichlorobenzene	2251	100	2000	0	113	75-130	0			
1,4-Dichlorobenzene	2219	100	2000	0	111	75-130	0			
2-Butanone	2097	500	2000	0	105	55-150	0			
2-Hexanone	2088	500	2000	0	104	60-135	0			
4-Methyl-2-pentanone	2741	100	2000	0	137	77-178	0			
Acetone	2005	1,000	2000	0	100	60-160	0			
Acrylonitrile	1954	100	2000	0	97.7	60-140	0			
Benzene	2440	100	2000	20	121	85-125	0			
Bromochloromethane	2454	100	2000	0	123	72-141	0			
Bromodichloromethane	2292	100	2000	0	115	75-125	0			
Bromoform	2048	100	2000	0	102	60-125	0			
Bromomethane	2311	100	2000	0	116	30-185	0			
Carbon disulfide	2504	100	2000	0	125	60-165	0			
Carbon tetrachloride	2515	100	2000	0	126	65-140	0			
Chlorobenzene	2346	100	2000	0	117	80-120	0			
Chloroethane	2169	100	2000	0	108	50-140	0			
Chloroform	2336	100	2000	0	117	80-130	0			
Chloromethane	1988	100	2000	0	99.4	46-148	0			
cis-1,2-Dichloroethene	2320	100	2000	0	116	75-134	0			
cis-1,3-Dichloropropene	2283	100	2000	0	114	70-130	0			
Dibromochloromethane	2143	100	2000	0	107	60-115	0			
Dibromomethane	2273	100	2000	0	114	85-125	0			
Dichlorodifluoromethane	1823	100	2000	0	91.2	20-120	0			
Diethyl ether	2257	100	2000	0	113	70-130	0			
Ethylbenzene	2411	100	2000	25	119	78-113	0			S
Hexachloroethane	2025	100	2000	0	101	50-124	0			
Isopropylbenzene	2493	100	2000	0	125	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	4595	200	4000	203	110	75-130	0	
Methyl iodide	1752	100	2000	0	87.6	60-160	0	
Methyl tert-butyl ether	2154	100	2000	0	108	68-129	0	
Methylene chloride	2366	500	2000	0	118	75-140	0	
Naphthalene	3649	500	2000	2431	60.9	55-160	0	
n-Propylbenzene	2496	100	2000	0	125	76-116	0	S
o-Xylene	2270	100	2000	107	108	80-125	0	
Styrene	2221	100	2000	0	111	83-137	0	
Tetrachloroethene	2546	100	2000	0	127	68-166	0	
Toluene	2346	100	2000	22	116	85-125	0	
trans-1,2-Dichloroethene	2503	100	2000	0	125	80-140	0	
trans-1,3-Dichloropropene	2196	100	2000	0	110	56-132	0	
trans-1,4-Dichloro-2-butene	1648	200	2000	0	82.4	46-118	0	
Trichloroethene	2399	100	2000	0	120	84-130	0	
Trichlorofluoromethane	2287	100	2000	0	114	60-140	0	
Vinyl chloride	2071	100	2000	0	104	50-136	0	
Xylenes, Total	6865	300	6000	310	109	80-126	0	
Surr: 1,2-Dichloroethane-d4	*2009*	0	*2000*	0	*100*	*75-120*	0	
Surr: 4-Bromofluorobenzene	*2027*	0	*2000*	0	*101*	*80-110*	0	
Surr: Dibromofluoromethane	*2016*	0	*2000*	0	*101*	*85-115*	0	
Surr: Toluene-d8	*1971*	0	*2000*	0	*98.6*	*85-110*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 18011389
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

MSD Sample ID: **18011422-03A MSD** Units: **µg/L** Analysis Date: **02/01/18 09:46 PM**
Client ID: Run ID: **VMS6_180201A** SeqNo: **4875099** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	2336	100	2000	0	117	73-114	2407	2.99	30	S
1,1,1-Trichloroethane	2551	100	2000	0	128	75-130	2612	2.36	30	
1,1,2,2-Tetrachloroethane	2321	100	2000	0	116	75-130	2362	1.75	30	
1,1,2-Trichloroethane	2330	100	2000	0	116	75-125	2371	1.74	30	
1,1-Dichloroethane	2397	100	2000	0	120	75-133	2453	2.31	30	
1,1-Dichloroethene	2749	100	2000	0	137	70-145	2776	0.977	30	
1,2,3-Trichloropropane	2193	100	2000	0	110	75-125	2232	1.76	30	
1,2,4-Trichlorobenzene	2109	100	2000	0	105	70-135	2142	1.55	30	
1,2,4-Trimethylbenzene	2421	100	2000	68	118	75-130	2422	0.0413	30	
1,2-Dibromo-3-chloropropane	2068	100	2000	0	103	60-130	2008	2.94	30	
1,2-Dibromoethane	2309	100	2000	0	115	67-155	2359	2.14	30	
1,2-Dichlorobenzene	2209	100	2000	0	110	70-130	2237	1.26	30	
1,2-Dichloroethane	2298	100	2000	0	115	78-125	2356	2.49	30	
1,2-Dichloropropane	2281	100	2000	0	114	75-125	2303	0.96	30	
1,3,5-Trimethylbenzene	2477	100	2000	27	122	75-130	2522	1.8	30	
1,3-Dichlorobenzene	2238	100	2000	0	112	75-130	2251	0.579	30	
1,4-Dichlorobenzene	2171	100	2000	0	109	75-130	2219	2.19	30	
2-Butanone	2063	500	2000	0	103	55-150	2097	1.63	30	
2-Hexanone	1970	500	2000	0	98.5	60-135	2088	5.82	30	
4-Methyl-2-pentanone	2643	100	2000	0	132	77-178	2741	3.64	30	
Acetone	1965	1,000	2000	0	98.2	60-160	2005	2.02	30	
Acrylonitrile	2027	100	2000	0	101	60-140	1954	3.67	30	
Benzene	2349	100	2000	20	116	85-125	2440	3.8	30	
Bromochloromethane	2408	100	2000	0	120	72-141	2454	1.89	30	
Bromodichloromethane	2299	100	2000	0	115	75-125	2292	0.305	30	
Bromoform	2067	100	2000	0	103	60-125	2048	0.923	30	
Bromomethane	2475	100	2000	0	124	30-185	2311	6.85	30	
Carbon disulfide	2452	100	2000	0	123	60-165	2504	2.1	30	
Carbon tetrachloride	2543	100	2000	0	127	65-140	2515	1.11	30	
Chlorobenzene	2307	100	2000	0	115	80-120	2346	1.68	30	
Chloroethane	2072	100	2000	0	104	50-140	2169	4.57	30	
Chloroform	2325	100	2000	0	116	80-130	2336	0.472	30	
Chloromethane	2027	100	2000	0	101	46-148	1988	1.94	30	
cis-1,2-Dichloroethene	2279	100	2000	0	114	75-134	2320	1.78	30	
cis-1,3-Dichloropropene	2265	100	2000	0	113	70-130	2283	0.792	30	
Dibromochloromethane	2125	100	2000	0	106	60-115	2143	0.843	30	
Dibromomethane	2207	100	2000	0	110	85-125	2273	2.95	30	
Dichlorodifluoromethane	1724	100	2000	0	86.2	20-120	1823	5.58	30	
Diethyl ether	2186	100	2000	0	109	70-130	2257	3.2	30	
Ethylbenzene	2373	100	2000	25	117	78-113	2411	1.59	30	S
Hexachloroethane	2056	100	2000	0	103	50-124	2025	1.52	30	
Isopropylbenzene	2465	100	2000	0	123	80-127	2493	1.13	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R229256** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	4543	200	4000	203	108	75-130	4595	1.14	30	
Methyl iodide	2159	100	2000	0	108	60-160	1752	20.8	30	
Methyl tert-butyl ether	2157	100	2000	0	108	68-129	2154	0.139	30	
Methylene chloride	2305	500	2000	0	115	75-140	2366	2.61	30	
Naphthalene	3535	500	2000	2431	55.2	55-160	3649	3.17	30	
n-Propylbenzene	2455	100	2000	0	123	76-116	2496	1.66	30	S
o-Xylene	2251	100	2000	107	107	80-125	2270	0.841	30	
Styrene	2192	100	2000	0	110	83-137	2221	1.31	30	
Tetrachloroethene	2461	100	2000	0	123	68-166	2546	3.4	30	
Toluene	2327	100	2000	22	115	85-125	2346	0.813	30	
trans-1,2-Dichloroethene	2506	100	2000	0	125	80-140	2503	0.12	30	
trans-1,3-Dichloropropene	2141	100	2000	0	107	56-132	2196	2.54	30	
trans-1,4-Dichloro-2-butene	1711	200	2000	0	85.6	46-118	1648	3.75	30	
Trichloroethene	2360	100	2000	0	118	84-130	2399	1.64	30	
Trichlorofluoromethane	2196	100	2000	0	110	60-140	2287	4.06	30	
Vinyl chloride	2037	100	2000	0	102	50-136	2071	1.66	30	
Xylenes, Total	6794	300	6000	310	108	80-126	6865	1.04	30	
Surr: 1,2-Dichloroethane-d4	*1960*	0	*2000*	0	*98*	*75-120*	2009	*2.47*	*30*	
Surr: 4-Bromofluorobenzene	*2012*	0	*2000*	0	*101*	*80-110*	2027	*0.743*	*30*	
Surr: Dibromofluoromethane	*1968*	0	*2000*	0	*98.4*	*85-115*	2016	*2.41*	*30*	
Surr: Toluene-d8	*1972*	0	*2000*	0	*98.6*	*85-110*	1971	*0.0507*	*30*	

The following samples were analyzed in this batch: 18011389-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of ____

COC ID: 47107

ALS Project Manager: JB

ALS Work Order #: 1801389

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	GE Riverview	A	VOC
Work Order		Project Number	0442424	B	
Company Name	ERM, Inc	Bill To Company	ERM, Inc	C	
Send Report To	Dan Rusiecki	Invoice Attn	Debra Mose/Accounts Payable	D	
Address	8425 Woodfield Crossing Blvd Suite 580W	Address	One Continental Towers 1701 Golf Road, Suite 1- 1000	E	
				F	
City/State/Zip	Indianapolis, IN 46240	City/State/Zip	Rolling Meadows, IL 60008	G	
Phone	(317) 706-2000	Phone		H	
Fax	(317) 706-2010	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	VP-1	1/24/18	15:20p	GW	1,8	3	X										
2	VP-2	1/24/18	15:50p	GW	1,8	3	X										
3	VP-6	1/24/18	16:25p	GW	1,8	3	X										
4	VP-4	1/24/18	17:20p	GW	1,8	3	X										
5	VP-3	1/25/18	8:35a	GW	1,8	3	X										
6	VP-5	1/25/18	8:50a	GW	1,8	3	X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Dan Rusiecki / Dan Rusiecki

Shipment Method: Hand

Turnaround Time in Business Days (BD): ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other ____

Results Due Date:

Relinquished by:	Dan Rusiecki	Date: 1-26-18	Time:	Received by:	
Relinquished by:	Corey Finley	Date: 1-29-18	Time: 0900	Received by (Laboratory):	Nicole Freeman
Logged by (Laboratory):	NJF	Date: 1/29/18	Time: 1045	Checked by (Laboratory):	JB

Notes:

Cooler ID	Cooler Temp
SR2	5.2

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **ERM-HOLL** Date/Time Received: **29-Jan-18 09:00**

Work Order: **18011389** Received by: **NCF**

Checklist completed by Nicole Fredericks (eSignature) 29-Jan-18 (Date) Reviewed by: Tom Bramish (eSignature) 29-Jan-18 (Date)

Matrices: Groundwater

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	5.2/5.2	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/29/201810:53:23 AM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Fibertec
environmental
services

Tuesday, February 06, 2018

Fibertec Project Number:	82961
Project Identification:	GE Riverview (0442424) /0442424
Submittal Date:	01/26/2018

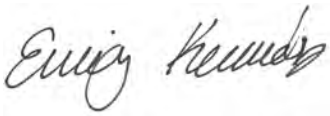
Mr. Dan Rusiecki
Environmental Resources Management - Holland
3352 128th Avenue
Holland, MI 49424

Dear Mr. Rusiecki,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 10 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



By Emily Kennedy at 12:09 PM, Feb 06, 2018

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-5 (5')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:30**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-001** **Matrix: Air**
Method: EPA TO-15 **Description: VP-5 (5')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Acetone	U		µg/m3	57	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
2. Benzene	**31**		µg/m3	19	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
3. Benzyl Chloride	U		µg/m3	6.2	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
4. Bromodichloromethane	U		µg/m3	8.0	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
5. Bromoform	U		µg/m3	62	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
6. Bromomethane	U		µg/m3	23	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
7. 1,3-Butadiene	**3.8**		µg/m3	0.68	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
8. 2-Butanone	U		µg/m3	35	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 9. Carbon Disulfide	**61**		µg/m3	37	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
10. Carbon Tetrachloride	U		µg/m3	7.5	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
11. Chlorobenzene	U		µg/m3	28	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
12. Chloroethane	U		µg/m3	16	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
13. Chloroform	U		µg/m3	5.9	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
14. Chloromethane	U		µg/m3	12	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
15. Cyclohexane	U		µg/m3	41	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
16. Dibromochloromethane	U		µg/m3	4.1	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
17. 1,2-Dichlorobenzene	U		µg/m3	36	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
18. 1,3-Dichlorobenzene	U		µg/m3	36	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
19. 1,4-Dichlorobenzene	U		µg/m3	36	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
20. Dichlorodifluoromethane	U		µg/m3	30	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
21. 1,1-Dichloroethane	**270**		µg/m3	24	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
22. 1,2-Dichloroethane	U		µg/m3	4.9	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
23. 1,1-Dichloroethene	U		µg/m3	24	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
24. cis-1,2-Dichloroethene	**330**		µg/m3	24	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
25. trans-1,2-Dichloroethene	**45**		µg/m3	24	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
26. 1,2-Dichloropropane	U		µg/m3	28	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
27. cis-1,3-Dichloropropene	U		µg/m3	27	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
28. trans-1,3-Dichloropropene	U		µg/m3	27	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
29. 1,4-Dioxane	U		µg/m3	22	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 30. Ethyl Acetate	U		µg/m3	43	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
31. Ethylbenzene	U		µg/m3	52	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
32. Ethylene Dibromide	U		µg/m3	0.97	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
33. n-Heptane	**89**		µg/m3	49	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
34. Hexachlorobutadiene	U		µg/m3	5.1	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
35. n-Hexane	**91**		µg/m3	42	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 36. 2-Hexanone	U		µg/m3	49	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 37. Isopropanol	U		µg/m3	29	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-5 (5')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:30**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-001** **Matrix: Air**
Method: EPA TO-15 **Description: VP-5 (5')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
38. Methylene Chloride	U		µg/m3	42	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 39. 2-Methylnaphthalene	U		µg/m3	140	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
40. 4-Methyl-2-pentanone	U		µg/m3	49	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
41. MTBE	U		µg/m3	22	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 42. Naphthalene	U		µg/m3	28	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
43. Styrene	U		µg/m3	51	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
44. 1,1,2,2-Tetrachloroethane	U		µg/m3	3.3	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
45. Tetrachloroethene	**460**		µg/m3	41	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 46. Tetrahydrofuran	U		µg/m3	11	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
47. Toluene	**130**		µg/m3	23	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
48. 1,2,4-Trichlorobenzene	U		µg/m3	89	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
49. 1,1,1-Trichloroethane	**320**		µg/m3	33	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
50. 1,1,2-Trichloroethane	U		µg/m3	6.5	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
51. Trichloroethene	**210**		µg/m3	1.6	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
52. Trichlorofluoromethane	U		µg/m3	34	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
53. 1,1,2-Trichlorotrifluoroethane	U		µg/m3	46	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
54. 1,2,4-Trimethylbenzene	U		µg/m3	29	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
55. 1,3,5-Trimethylbenzene	U		µg/m3	29	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
56. Vinyl Acetate	U		µg/m3	42	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
57. Vinyl Chloride	U		µg/m3	15	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
58. m&p-Xylene	**64**		µg/m3	52	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
59. o-Xylene	U		µg/m3	52	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 60. Xylenes	U		µg/m3	100	4.5	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Surrogate Summary			Control Limits	Batch
4-Bromofluorobenzene(S)	**101**	%	80-120	VK18A30A

Fibertec environmental services

Analytical Laboratory Report
Laboratory Project Number: 82961
Laboratory Sample Number: 82961-002

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-5 (8')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:35**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-002** **Matrix: Air**
Method: EPA TO-15 **Description: VP-5 (8')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Acetone	U		µg/m3	57	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
2. Benzene	**48**		µg/m3	19	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
3. Benzyl Chloride	U		µg/m3	6.2	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
4. Bromodichloromethane	U		µg/m3	8.0	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
5. Bromoform	U		µg/m3	62	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
6. Bromomethane	U		µg/m3	23	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
7. 1,3-Butadiene	**16**		µg/m3	1.5	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
8. 2-Butanone	U		µg/m3	35	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 9. Carbon Disulfide	U		µg/m3	37	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
10. Carbon Tetrachloride	U		µg/m3	7.5	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
11. Chlorobenzene	U		µg/m3	28	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
12. Chloroethane	U		µg/m3	16	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
13. Chloroform	U		µg/m3	5.9	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
14. Chloromethane	U		µg/m3	12	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
15. Cyclohexane	U		µg/m3	41	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
16. Dibromochloromethane	U		µg/m3	5.3	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
17. 1,2-Dichlorobenzene	U		µg/m3	36	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
18. 1,3-Dichlorobenzene	U		µg/m3	36	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
19. 1,4-Dichlorobenzene	U		µg/m3	36	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
20. Dichlorodifluoromethane	U		µg/m3	55	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
21. 1,1-Dichloroethane	**270**		µg/m3	24	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
22. 1,2-Dichloroethane	U		µg/m3	4.9	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
23. 1,1-Dichloroethene	U		µg/m3	24	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
24. cis-1,2-Dichloroethene	**180**		µg/m3	24	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
25. trans-1,2-Dichloroethene	**35**		µg/m3	24	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
26. 1,2-Dichloropropane	U		µg/m3	28	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
27. cis-1,3-Dichloropropene	U		µg/m3	27	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
28. trans-1,3-Dichloropropene	U		µg/m3	27	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
29. 1,4-Dioxane	U		µg/m3	22	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 30. Ethyl Acetate	U		µg/m3	43	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
31. Ethylbenzene	**54**		µg/m3	52	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
32. Ethylene Dibromide	U		µg/m3	2.1	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
33. n-Heptane	**160**		µg/m3	49	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
34. Hexachlorobutadiene	U		µg/m3	7.1	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
35. n-Hexane	**170**		µg/m3	42	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 36. 2-Hexanone	U		µg/m3	49	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 37. Isopropanol	U		µg/m3	29	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-5 (8')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:35**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-002** **Matrix: Air**
Method: EPA TO-15 **Description: VP-5 (8')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
38. Methylene Chloride	U		µg/m3	44	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 39. 2-Methylnaphthalene	U		µg/m3	150	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
40. 4-Methyl-2-pentanone	U		µg/m3	49	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
41. MTBE	U		µg/m3	22	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 42. Naphthalene	U		µg/m3	28	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
43. Styrene	U		µg/m3	57	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
44. 1,1,2,2-Tetrachloroethane	U		µg/m3	3.3	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
45. Tetrachloroethene	**700**		µg/m3	41	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 46. Tetrahydrofuran	U		µg/m3	23	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
47. Toluene	**260**		µg/m3	23	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
48. 1,2,4-Trichlorobenzene	U		µg/m3	98	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
49. 1,1,1-Trichloroethane	**1500**		µg/m3	33	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
50. 1,1,2-Trichloroethane	U		µg/m3	6.5	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
51. Trichloroethene	**16**		µg/m3	1.6	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
52. Trichlorofluoromethane	U		µg/m3	34	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
53. 1,1,2-Trichlorotrifluoroethane	U		µg/m3	46	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
54. 1,2,4-Trimethylbenzene	**73**		µg/m3	29	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
55. 1,3,5-Trimethylbenzene	U		µg/m3	29	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
56. Vinyl Acetate	U		µg/m3	42	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
57. Vinyl Chloride	U		µg/m3	15	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
58. m&p-Xylene	**210**		µg/m3	68	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
59. o-Xylene	U		µg/m3	52	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 60. Xylenes	**250**		µg/m3	100	9.7	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Surrogate Summary			Control Limits	Batch
4-Bromofluorobenzene(S)	**101**	%	80-120	VK18A30A

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-4 (5')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:45**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-003** **Matrix: Air**
Method: EPA TO-15 **Description: VP-4 (5')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Acetone	U		µg/m3	57	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
2. Benzene	**37**		µg/m3	19	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
3. Benzyl Chloride	U		µg/m3	6.2	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
4. Bromodichloromethane	U		µg/m3	8.0	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
5. Bromoform	U		µg/m3	62	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
6. Bromomethane	U		µg/m3	23	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
7. 1,3-Butadiene	**1.5**		µg/m3	0.74	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
8. 2-Butanone	U		µg/m3	35	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 9. Carbon Disulfide	**57**		µg/m3	37	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
10. Carbon Tetrachloride	U		µg/m3	7.5	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
11. Chlorobenzene	U		µg/m3	28	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
12. Chloroethane	U		µg/m3	16	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
13. Chloroform	U		µg/m3	5.9	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
14. Chloromethane	U		µg/m3	12	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
15. Cyclohexane	U		µg/m3	41	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
16. Dibromochloromethane	U		µg/m3	4.1	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
17. 1,2-Dichlorobenzene	U		µg/m3	36	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
18. 1,3-Dichlorobenzene	U		µg/m3	36	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
19. 1,4-Dichlorobenzene	U		µg/m3	36	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
20. Dichlorodifluoromethane	U		µg/m3	30	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
21. 1,1-Dichloroethane	U		µg/m3	24	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
22. 1,2-Dichloroethane	U		µg/m3	4.9	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
23. 1,1-Dichloroethene	U		µg/m3	24	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
24. cis-1,2-Dichloroethene	U		µg/m3	24	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
25. trans-1,2-Dichloroethene	U		µg/m3	24	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
26. 1,2-Dichloropropane	U		µg/m3	28	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
27. cis-1,3-Dichloropropene	U		µg/m3	27	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
28. trans-1,3-Dichloropropene	U		µg/m3	27	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
29. 1,4-Dioxane	U		µg/m3	22	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 30. Ethyl Acetate	U		µg/m3	43	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
31. Ethylbenzene	U		µg/m3	52	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
32. Ethylene Dibromide	U		µg/m3	1.1	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
33. n-Heptane	**85**		µg/m3	49	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
34. Hexachlorobutadiene	U		µg/m3	5.1	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
35. n-Hexane	**110**		µg/m3	42	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 36. 2-Hexanone	U		µg/m3	49	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 37. Isopropanol	U		µg/m3	29	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-4 (5')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:45**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-003** **Matrix: Air**
Method: EPA TO-15 **Description: VP-4 (5')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
38. Methylene Chloride	U		µg/m3	42	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 39. 2-Methylnaphthalene	U		µg/m3	140	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
40. 4-Methyl-2-pentanone	U		µg/m3	49	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
41. MTBE	U		µg/m3	22	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 42. Naphthalene	U		µg/m3	28	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
43. Styrene	U		µg/m3	51	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
44. 1,1,2,2-Tetrachloroethane	U		µg/m3	3.3	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
45. Tetrachloroethene	**140**		µg/m3	41	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 46. Tetrahydrofuran	U		µg/m3	12	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
47. Toluene	**120**		µg/m3	23	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
48. 1,2,4-Trichlorobenzene	U		µg/m3	89	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
49. 1,1,1-Trichloroethane	U		µg/m3	33	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
50. 1,1,2-Trichloroethane	U		µg/m3	6.5	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
51. Trichloroethene	U		µg/m3	1.6	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
52. Trichlorofluoromethane	U		µg/m3	34	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
53. 1,1,2-Trichlorotrifluoroethane	U		µg/m3	46	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
54. 1,2,4-Trimethylbenzene	U		µg/m3	29	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
55. 1,3,5-Trimethylbenzene	U		µg/m3	29	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
56. Vinyl Acetate	U		µg/m3	42	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
57. Vinyl Chloride	U		µg/m3	15	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
58. m&p-Xylene	U		µg/m3	52	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
59. o-Xylene	U		µg/m3	52	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 60. Xylenes	U		µg/m3	100	4.9	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Surrogate Summary			Control Limits	Batch
4-Bromofluorobenzene(S)	**102**	%	80-120	VK18A30A

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-4 (8')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:48**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-004** **Matrix: Air**
Method: EPA TO-15 **Description: VP-4 (8')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Acetone	U		µg/m3	57	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
2. Benzene	**49**		µg/m3	19	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
3. Benzyl Chloride	U		µg/m3	6.2	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
4. Bromodichloromethane	U		µg/m3	8.0	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
5. Bromoform	U		µg/m3	62	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
6. Bromomethane	U		µg/m3	23	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
7. 1,3-Butadiene	**11**		µg/m3	0.78	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
8. 2-Butanone	U		µg/m3	35	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 9. Carbon Disulfide	**67**		µg/m3	37	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
10. Carbon Tetrachloride	U		µg/m3	7.5	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
11. Chlorobenzene	U		µg/m3	28	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
12. Chloroethane	U		µg/m3	16	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
13. Chloroform	U		µg/m3	5.9	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
14. Chloromethane	U		µg/m3	12	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
15. Cyclohexane	U		µg/m3	41	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
16. Dibromochloromethane	U		µg/m3	4.1	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
17. 1,2-Dichlorobenzene	U		µg/m3	36	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
18. 1,3-Dichlorobenzene	U		µg/m3	36	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
19. 1,4-Dichlorobenzene	U		µg/m3	36	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
20. Dichlorodifluoromethane	U		µg/m3	30	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
21. 1,1-Dichloroethane	U		µg/m3	24	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
22. 1,2-Dichloroethane	U		µg/m3	4.9	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
23. 1,1-Dichloroethene	U		µg/m3	24	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
24. cis-1,2-Dichloroethene	U		µg/m3	24	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
25. trans-1,2-Dichloroethene	U		µg/m3	24	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
26. 1,2-Dichloropropane	U		µg/m3	28	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
27. cis-1,3-Dichloropropene	U		µg/m3	27	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
28. trans-1,3-Dichloropropene	U		µg/m3	27	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
29. 1,4-Dioxane	U		µg/m3	22	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 30. Ethyl Acetate	U		µg/m3	43	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
31. Ethylbenzene	U		µg/m3	52	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
32. Ethylene Dibromide	U		µg/m3	1.1	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
33. n-Heptane	**130**		µg/m3	49	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
34. Hexachlorobutadiene	U		µg/m3	5.1	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
35. n-Hexane	**170**		µg/m3	42	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 36. 2-Hexanone	U		µg/m3	49	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 37. Isopropanol	U		µg/m3	29	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Client Identification:	**Environmental Resources Management - Holland**	Sample Description:	**VP-4 (8')**	Chain of Custody:	**165638**
Client Project Name:	**GE Riverview (0442424)**	Sample No:		Collect Date:	**01/26/18**
Client Project No:	**0442424**	Sample Matrix:	**Air**	Collect Time:	**14:48**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) **Aliquot ID: 82961-004** **Matrix: Air**
Method: EPA TO-15 **Description: VP-4 (8')**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
38. Methylene Chloride	U		µg/m3	42	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 39. 2-Methylnaphthalene	U		µg/m3	140	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
40. 4-Methyl-2-pentanone	U		µg/m3	49	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
41. MTBE	U		µg/m3	22	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 42. Naphthalene	U		µg/m3	28	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
43. Styrene	U		µg/m3	51	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
44. 1,1,2,2-Tetrachloroethane	U		µg/m3	3.3	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
45. Tetrachloroethene	**130**		µg/m3	41	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 46. Tetrahydrofuran	U		µg/m3	13	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
47. Toluene	**140**		µg/m3	23	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
48. 1,2,4-Trichlorobenzene	U		µg/m3	89	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
49. 1,1,1-Trichloroethane	U		µg/m3	33	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
50. 1,1,2-Trichloroethane	U		µg/m3	6.5	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
51. Trichloroethene	U		µg/m3	1.6	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
52. Trichlorofluoromethane	U		µg/m3	34	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
53. 1,1,2-Trichlorotrifluoroethane	U		µg/m3	46	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
54. 1,2,4-Trimethylbenzene	U		µg/m3	29	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
55. 1,3,5-Trimethylbenzene	U		µg/m3	29	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
56. Vinyl Acetate	U		µg/m3	42	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
57. Vinyl Chloride	U		µg/m3	15	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
58. m&p-Xylene	U		µg/m3	52	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
59. o-Xylene	U		µg/m3	52	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS
‡ 60. Xylenes	U		µg/m3	100	5.2	01/30/18	VK18A30A	01/31/18	VK18A30A	LDS

Surrogate Summary			Control Limits	Batch
4-Bromofluorobenzene(S)	**100**	%	80-120	VK18A30A

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits
D: The sample or extract was analyzed at a DF greater than 1.

Exception Summary:

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number(s):

T104704518-18-7 (TX)

23-Mar-2018

Dan Rusiecki
ERM, Inc
3352 128th Avenue
Holland, MI 49424

Re: **GE Riverview (0442424)** Work Order: **1803902**

Dear Dan,

ALS Environmental received 3 samples on 15-Mar-2018 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 28.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager

Report of Laboratory Analysis

Certificate No: MN 998501

ALS Group, USA

Date: 23-Mar-18

Client: ERM, Inc
Project: GE Riverview (0442424)
Work Order: **1803902**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1803902-01	VP-7	Water		03/14/18 12:03	03/15/18 08:30	☐
1803902-02	VP-8	Water		03/14/18 12:45	03/15/18 08:30	☐
1803902-03	Trip Blank	Water		03/14/18	03/15/18 08:30	☐

ALS Group, USA

Date: 23-Mar-18

Client: ERM, Inc
Project: GE Riverview (0442424)
WorkOrder: **1803902**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter

Client: ERM, Inc
Project: GE Riverview (0442424)
Work Order: 1803902

Case Narrative

Samples for the above noted Work Order were received on 03/15/18. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
Batch R231832, Method VOC_8260_W, Sample VLCSW1-180316: The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for Methyl iodide.

Batch R231850, Method VOC_8260_W, Sample 1803902-02A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding results in the parent sample should be considered estimated for Bromomethane and Chloromethane.

No other deviations or anomalies were noted.

ALS Group, USA

Date: *23-Mar-18*

Client: ERM, Inc
Project: GE Riverview (0442424)
Work Order: 1803902
Sample ID: VP-7
Lab ID: 1803902-01
Collection Date: 03/14/18 12:03 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,1,1-Trichloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,1,2-Trichlorotrifluoroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2,3-Trichloropropane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2,4-Trichlorobenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2,4-Trimethylbenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2-Dibromo-3-chloropropane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2-Dibromoethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2-Dichlorobenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,3,5-Trimethylbenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,3-Dichlorobenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
1,4-Dichlorobenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
2-Butanone	ND		5.0	µg/L	1	03/16/18 05:49 PM
2-Hexanone	ND		5.0	µg/L	1	03/16/18 05:49 PM
2-Methylnaphthalene	ND		5.0	µg/L	1	03/16/18 05:49 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	03/16/18 05:49 PM
Acetone	ND		10	µg/L	1	03/16/18 05:49 PM
Acrylonitrile	ND		1.0	µg/L	1	03/16/18 05:49 PM
Benzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
Bromochloromethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Bromodichloromethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Bromoform	ND		1.0	µg/L	1	03/16/18 05:49 PM
Bromomethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Carbon disulfide	ND		1.0	µg/L	1	03/16/18 05:49 PM
Carbon tetrachloride	ND		1.0	µg/L	1	03/16/18 05:49 PM
Chlorobenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
Chloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Chloroform	ND		1.0	µg/L	1	03/16/18 05:49 PM
Chloromethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
cis-1,2-Dichloroethene	**55**		**1.0**	**µg/L**	1	03/16/18 05:49 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	03/16/18 05:49 PM
Dibromochloromethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Dibromomethane	ND		1.0	µg/L	1	03/16/18 05:49 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 1803902
Sample ID: VP-7 **Lab ID:** 1803902-01
Collection Date: 03/14/18 12:03 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Diethyl ether	ND		1.0	µg/L	1	03/16/18 05:49 PM
Ethylbenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
Hexachloroethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Isopropylbenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
m,p-Xylene	ND		2.0	µg/L	1	03/16/18 05:49 PM
Methyl iodide	ND		1.0	µg/L	1	03/16/18 05:49 PM
Methyl tert-butyl ether	ND		1.0	µg/L	1	03/16/18 05:49 PM
Methylene chloride	ND		5.0	µg/L	1	03/16/18 05:49 PM
Naphthalene	ND		5.0	µg/L	1	03/16/18 05:49 PM
n-Propylbenzene	ND		1.0	µg/L	1	03/16/18 05:49 PM
o-Xylene	ND		1.0	µg/L	1	03/16/18 05:49 PM
Styrene	ND		1.0	µg/L	1	03/16/18 05:49 PM
Tetrachloroethene	**8.6**		**1.0**	**µg/L**	1	03/16/18 05:49 PM
Toluene	ND		1.0	µg/L	1	03/16/18 05:49 PM
trans-1,2-Dichloroethene	**2.3**		**1.0**	**µg/L**	1	03/16/18 05:49 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	03/16/18 05:49 PM
trans-1,4-Dichloro-2-butene	ND		2.0	µg/L	1	03/16/18 05:49 PM
Trichloroethene	**24**		**1.0**	**µg/L**	1	03/16/18 05:49 PM
Trichlorofluoromethane	ND		1.0	µg/L	1	03/16/18 05:49 PM
Vinyl acetate	ND		5.0	µg/L	1	03/16/18 05:49 PM
Vinyl chloride	ND		1.0	µg/L	1	03/16/18 05:49 PM
Xylenes, Total	ND		3.0	µg/L	1	03/16/18 05:49 PM
Surr: 1,2-Dichloroethane-d4	*112*		*75-120*	*%REC*	1	03/16/18 05:49 PM
Surr: 4-Bromofluorobenzene	*95.0*		*80-110*	*%REC*	1	03/16/18 05:49 PM
Surr: Dibromofluoromethane	*104*		*85-115*	*%REC*	1	03/16/18 05:49 PM
Surr: Toluene-d8	*97.7*		*85-110*	*%REC*	1	03/16/18 05:49 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 1803902
Sample ID: VP-8 **Lab ID:** 1803902-02
Collection Date: 03/14/18 12:45 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **WH**
1,1,1,2-Tetrachloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,1,1-Trichloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,1,2,2-Tetrachloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,1,2-Trichloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,1,2-Trichlorotrifluoroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,1-Dichloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,1-Dichloroethene	ND		20	µg/L	20	03/16/18 03:51 PM
1,2,3-Trichloropropane	ND		20	µg/L	20	03/16/18 03:51 PM
1,2,4-Trichlorobenzene	ND		20	µg/L	20	03/16/18 03:51 PM
1,2,4-Trimethylbenzene	ND		20	µg/L	20	03/16/18 03:51 PM
1,2-Dibromo-3-chloropropane	ND		20	µg/L	20	03/16/18 03:51 PM
1,2-Dibromoethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,2-Dichlorobenzene	ND		20	µg/L	20	03/16/18 03:51 PM
1,2-Dichloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
1,2-Dichloropropane	ND		20	µg/L	20	03/16/18 03:51 PM
1,3,5-Trimethylbenzene	ND		20	µg/L	20	03/16/18 03:51 PM
1,3-Dichlorobenzene	ND		20	µg/L	20	03/16/18 03:51 PM
1,4-Dichlorobenzene	ND		20	µg/L	20	03/16/18 03:51 PM
2-Butanone	ND		100	µg/L	20	03/16/18 03:51 PM
2-Hexanone	ND		100	µg/L	20	03/16/18 03:51 PM
2-Methylnaphthalene	ND		100	µg/L	20	03/16/18 03:51 PM
4-Methyl-2-pentanone	ND		20	µg/L	20	03/16/18 03:51 PM
Acetone	ND		200	µg/L	20	03/16/18 03:51 PM
Acrylonitrile	ND		20	µg/L	20	03/16/18 03:51 PM
Benzene	ND		20	µg/L	20	03/16/18 03:51 PM
Bromochloromethane	ND		20	µg/L	20	03/16/18 03:51 PM
Bromodichloromethane	ND		20	µg/L	20	03/16/18 03:51 PM
Bromoform	ND		20	µg/L	20	03/16/18 03:51 PM
Bromomethane	ND		20	µg/L	20	03/16/18 03:51 PM
Carbon disulfide	ND		20	µg/L	20	03/16/18 03:51 PM
Carbon tetrachloride	ND		20	µg/L	20	03/16/18 03:51 PM
Chlorobenzene	ND		20	µg/L	20	03/16/18 03:51 PM
Chloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
Chloroform	ND		20	µg/L	20	03/16/18 03:51 PM
Chloromethane	ND		20	µg/L	20	03/16/18 03:51 PM
cis-1,2-Dichloroethene	**1,800**		**20**	**µg/L**	20	03/16/18 03:51 PM
cis-1,3-Dichloropropene	ND		20	µg/L	20	03/16/18 03:51 PM
Dibromochloromethane	ND		20	µg/L	20	03/16/18 03:51 PM
Dibromomethane	ND		20	µg/L	20	03/16/18 03:51 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 1803902
Sample ID: VP-8 **Lab ID:** 1803902-02
Collection Date: 03/14/18 12:45 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		20	µg/L	20	03/16/18 03:51 PM
Diethyl ether	ND		20	µg/L	20	03/16/18 03:51 PM
Ethylbenzene	ND		20	µg/L	20	03/16/18 03:51 PM
Hexachloroethane	ND		20	µg/L	20	03/16/18 03:51 PM
Isopropylbenzene	ND		20	µg/L	20	03/16/18 03:51 PM
m,p-Xylene	ND		40	µg/L	20	03/16/18 03:51 PM
Methyl iodide	ND		20	µg/L	20	03/16/18 03:51 PM
Methyl tert-butyl ether	ND		20	µg/L	20	03/16/18 03:51 PM
Methylene chloride	ND		100	µg/L	20	03/16/18 03:51 PM
Naphthalene	ND		100	µg/L	20	03/16/18 03:51 PM
n-Propylbenzene	ND		20	µg/L	20	03/16/18 03:51 PM
o-Xylene	ND		20	µg/L	20	03/16/18 03:51 PM
Styrene	ND		20	µg/L	20	03/16/18 03:51 PM
Tetrachloroethene	**560**		**20**	**µg/L**	20	03/16/18 03:51 PM
Toluene	ND		20	µg/L	20	03/16/18 03:51 PM
trans-1,2-Dichloroethene	**19**		**12**	**µg/L**	20	03/16/18 03:51 PM
trans-1,3-Dichloropropene	ND		20	µg/L	20	03/16/18 03:51 PM
trans-1,4-Dichloro-2-butene	ND		40	µg/L	20	03/16/18 03:51 PM
Trichloroethene	**3,000**		**100**	**µg/L**	100	03/16/18 10:23 PM
Trichlorofluoromethane	ND		20	µg/L	20	03/16/18 03:51 PM
Vinyl acetate	ND		100	µg/L	20	03/16/18 03:51 PM
Vinyl chloride	ND		20	µg/L	20	03/16/18 03:51 PM
Xylenes, Total	ND		60	µg/L	20	03/16/18 03:51 PM
Surr: 1,2-Dichloroethane-d4	*98.0*		*75-120*	*%REC*	20	03/16/18 03:51 PM
Surr: 1,2-Dichloroethane-d4	*112*		*75-120*	*%REC*	100	03/16/18 10:23 PM
Surr: 4-Bromofluorobenzene	*95.2*		*80-110*	*%REC*	100	03/16/18 10:23 PM
Surr: 4-Bromofluorobenzene	*98.6*		*80-110*	*%REC*	20	03/16/18 03:51 PM
Surr: Dibromofluoromethane	*103*		*85-115*	*%REC*	100	03/16/18 10:23 PM
Surr: Dibromofluoromethane	*97.3*		*85-115*	*%REC*	20	03/16/18 03:51 PM
Surr: Toluene-d8	*94.5*		*85-110*	*%REC*	20	03/16/18 03:51 PM
Surr: Toluene-d8	*98.4*		*85-110*	*%REC*	100	03/16/18 10:23 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 1803902
Sample ID: Trip Blank **Lab ID:** 1803902-03
Collection Date: 03/14/18 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **BG**
1,1,1,2-Tetrachloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,1,1-Trichloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,1,2-Trichlorotrifluoroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2,3-Trichloropropane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2,4-Trichlorobenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2,4-Trimethylbenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2-Dibromo-3-chloropropane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2-Dibromoethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2-Dichlorobenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,3,5-Trimethylbenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,3-Dichlorobenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
1,4-Dichlorobenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
2-Butanone	ND		5.0	µg/L	1	03/16/18 03:43 PM
2-Hexanone	ND		5.0	µg/L	1	03/16/18 03:43 PM
2-Methylnaphthalene	ND		5.0	µg/L	1	03/16/18 03:43 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	03/16/18 03:43 PM
Acetone	ND		10	µg/L	1	03/16/18 03:43 PM
Acrylonitrile	ND		1.0	µg/L	1	03/16/18 03:43 PM
Benzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Bromochloromethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Bromodichloromethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Bromoform	ND		1.0	µg/L	1	03/16/18 03:43 PM
Bromomethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Carbon disulfide	ND		1.0	µg/L	1	03/16/18 03:43 PM
Carbon tetrachloride	ND		1.0	µg/L	1	03/16/18 03:43 PM
Chlorobenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Chloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Chloroform	ND		1.0	µg/L	1	03/16/18 03:43 PM
Chloromethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	03/16/18 03:43 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Dibromochloromethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Dibromomethane	ND		1.0	µg/L	1	03/16/18 03:43 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ERM, Inc
Project: GE Riverview (0442424) **Work Order:** 1803902
Sample ID: Trip Blank **Lab ID:** 1803902-03
Collection Date: 03/14/18 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dichlorodifluoromethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Diethyl ether	ND		1.0	µg/L	1	03/16/18 03:43 PM
Ethylbenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Hexachloroethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Isopropylbenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
m,p-Xylene	ND		2.0	µg/L	1	03/16/18 03:43 PM
Methyl iodide	ND		1.0	µg/L	1	03/16/18 03:43 PM
Methyl tert-butyl ether	ND		1.0	µg/L	1	03/16/18 03:43 PM
Methylene chloride	ND		5.0	µg/L	1	03/16/18 03:43 PM
Naphthalene	ND		5.0	µg/L	1	03/16/18 03:43 PM
n-Propylbenzene	ND		1.0	µg/L	1	03/16/18 03:43 PM
o-Xylene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Styrene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Tetrachloroethene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Toluene	ND		1.0	µg/L	1	03/16/18 03:43 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	03/16/18 03:43 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	03/16/18 03:43 PM
trans-1,4-Dichloro-2-butene	ND		2.0	µg/L	1	03/16/18 03:43 PM
Trichloroethene	ND		1.0	µg/L	1	03/16/18 03:43 PM
Trichlorofluoromethane	ND		1.0	µg/L	1	03/16/18 03:43 PM
Vinyl acetate	ND		5.0	µg/L	1	03/16/18 03:43 PM
Vinyl chloride	ND		1.0	µg/L	1	03/16/18 03:43 PM
Xylenes, Total	ND		3.0	µg/L	1	03/16/18 03:43 PM
Surr: 1,2-Dichloroethane-d4	*109*		*75-120*	*%REC*	1	03/16/18 03:43 PM
Surr: 4-Bromofluorobenzene	*93.8*		*80-110*	*%REC*	1	03/16/18 03:43 PM
Surr: Dibromofluoromethane	*104*		*85-115*	*%REC*	1	03/16/18 03:43 PM
Surr: Toluene-d8	*98.8*		*85-110*	*%REC*	1	03/16/18 03:43 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

MBLK	Sample ID: **VBLKW1-180316-R231832**				Units: **µg/L**			Analysis Date: **03/16/18 01:45 PM**		
Client ID:		Run ID: **VMS7_180316A**			SeqNo: **4938863**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1,2-Trichlorotrifluoroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	1.0								
1,2-Dibromoethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Acrylonitrile	ND	1.0								
Benzene	ND	1.0								
Bromochloromethane	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
Diethyl ether	ND	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

Ethylbenzene	ND	1.0					
Hexachloroethane	ND	1.0					
Isopropylbenzene	ND	1.0					
m,p-Xylene	ND	2.0					
Methyl iodide	ND	1.0					
Methyl tert-butyl ether	ND	1.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Propylbenzene	ND	1.0					
o-Xylene	ND	1.0					
Styrene	ND	1.0					
Tetrachloroethene	ND	1.0					
Toluene	ND	1.0					
trans-1,2-Dichloroethene	ND	1.0					
trans-1,3-Dichloropropene	ND	1.0					
trans-1,4-Dichloro-2-butene	ND	2.0					
Trichlorofluoromethane	ND	1.0					
Vinyl acetate	ND	5.0					
Vinyl chloride	ND	1.0					
Xylenes, Total	ND	3.0					
Surr: 1,2-Dichloroethane-d4	*19.53*	0	*20*	0	*97.6*	*75-120*	0
Surr: 4-Bromofluorobenzene	*19.36*	0	*20*	0	*96.8*	*80-110*	0
Surr: Dibromofluoromethane	*19.81*	0	*20*	0	*99*	*85-115*	0
Surr: Toluene-d8	*19.2*	0	*20*	0	*96*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

LCS Sample ID: **VLCSW1-180316-R231832** Units: **µg/L** Analysis Date: **03/16/18 12:42 PM**
Client ID: Run ID: **VMS7_180316A** SeqNo: **4938862** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.48	1.0	20	0	107	73-114	0			
1,1,1-Trichloroethane	22.44	1.0	20	0	112	75-130	0			
1,1,2,2-Tetrachloroethane	20.74	1.0	20	0	104	75-130	0			
1,1,2-Trichloroethane	21.28	1.0	20	0	106	75-125	0			
1,1-Dichloroethane	21.05	1.0	20	0	105	75-133	0			
1,1-Dichloroethene	21.67	1.0	20	0	108	70-145	0			
1,2,3-Trichloropropane	20.27	1.0	20	0	101	75-125	0			
1,2,4-Trichlorobenzene	20.06	1.0	20	0	100	70-135	0			
1,2,4-Trimethylbenzene	21.02	1.0	20	0	105	75-130	0			
1,2-Dibromo-3-chloropropane	20.01	1.0	20	0	100	60-130	0			
1,2-Dibromoethane	27.22	1.0	20	0	136	67-155	0			
1,2-Dichlorobenzene	21.77	1.0	20	0	109	70-130	0			
1,2-Dichloroethane	19.71	1.0	20	0	98.6	78-125	0			
1,2-Dichloropropane	21.9	1.0	20	0	110	75-125	0			
1,3,5-Trimethylbenzene	21.53	1.0	20	0	108	75-130	0			
1,3-Dichlorobenzene	22.42	1.0	20	0	112	75-130	0			
1,4-Dichlorobenzene	21.57	1.0	20	0	108	75-130	0			
2-Butanone	19.87	5.0	20	0	99.4	55-150	0			
2-Hexanone	18.63	5.0	20	0	93.2	60-135	0			
4-Methyl-2-pentanone	22.88	1.0	20	0	114	77-178	0			
Acetone	19.98	10	20	0	99.9	60-160	0			
Acrylonitrile	19.37	1.0	20	0	96.8	60-140	0			
Benzene	20.33	1.0	20	0	102	85-125	0			
Bromochloromethane	22.34	1.0	20	0	112	72-141	0			
Bromodichloromethane	21.11	1.0	20	0	106	75-125	0			
Bromoform	17.82	1.0	20	0	89.1	60-125	0			
Bromomethane	19.52	1.0	20	0	97.6	30-185	0			
Carbon disulfide	22.13	1.0	20	0	111	60-165	0			
Carbon tetrachloride	21.86	1.0	20	0	109	65-140	0			
Chlorobenzene	21.56	1.0	20	0	108	80-120	0			
Chloroethane	20.09	1.0	20	0	100	50-140	0			
Chloroform	21.38	1.0	20	0	107	80-130	0			
Chloromethane	19.65	1.0	20	0	98.2	46-148	0			
cis-1,2-Dichloroethene	21.91	1.0	20	0	110	75-134	0			
cis-1,3-Dichloropropene	21.31	1.0	20	0	107	70-130	0			
Dibromochloromethane	18.35	1.0	20	0	91.8	60-115	0			
Dibromomethane	22.05	1.0	20	0	110	85-125	0			
Dichlorodifluoromethane	21.98	1.0	20	0	110	20-120	0			
Diethyl ether	19.96	1.0	20	0	99.8	70-130	0			
Ethylbenzene	21.35	1.0	20	0	107	76-123	0			
Hexachloroethane	19.5	1.0	20	0	97.5	50-124	0			
Isopropylbenzene	20.99	1.0	20	0	105	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

m,p-Xylene	41.9	2.0	40	0	105	75-130	0	
Methyl iodide	33.45	1.0	20	0	167	60-160	0	S
Methyl tert-butyl ether	20	1.0	20	0	100	68-129	0	
Methylene chloride	20.99	5.0	20	0	105	75-140	0	
Naphthalene	20.82	5.0	20	0	104	55-160	0	
n-Propylbenzene	20.79	1.0	20	0	104	76-116	0	
o-Xylene	20.74	1.0	20	0	104	80-125	0	
Styrene	22.25	1.0	20	0	111	83-137	0	
Tetrachloroethene	22.53	1.0	20	0	113	68-166	0	
Toluene	20.87	1.0	20	0	104	85-125	0	
trans-1,2-Dichloroethene	21.97	1.0	20	0	110	80-140	0	
trans-1,3-Dichloropropene	18.82	1.0	20	0	94.1	56-132	0	
trans-1,4-Dichloro-2-butene	17.33	2.0	20	0	86.6	46-118	0	
Trichlorofluoromethane	19.84	1.0	20	0	99.2	60-140	0	
Vinyl chloride	19.52	1.0	20	0	97.6	50-136	0	
Xylenes, Total	62.64	3.0	60	0	104	80-126	0	
Surr: 1,2-Dichloroethane-d4	*19.29*	0	*20*	0	*96.4*	*75-120*	0	
Surr: 4-Bromofluorobenzene	*19.72*	0	*20*	0	*98.6*	*80-110*	0	
Surr: Dibromofluoromethane	*19.98*	0	*20*	0	*99.9*	*85-115*	0	
Surr: Toluene-d8	*19.2*	0	*20*	0	*96*	*85-110*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

MS Sample ID: **1803906-16A MS** Units: **µg/L** Analysis Date: **03/16/18 09:25 PM**

Client ID: Run ID: **VMS7_180316A** SeqNo: **4938871** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	199.6	10	200	0	99.8	73-114	0			
1,1,1-Trichloroethane	203.9	10	200	0	102	75-130	0			
1,1,2,2-Tetrachloroethane	188.9	10	200	0	94.4	75-130	0			
1,1,2-Trichloroethane	185.9	10	200	0	93	75-125	0			
1,1-Dichloroethane	287.8	10	200	0	144	75-133	0			S
1,1-Dichloroethene	210	10	200	0	105	70-145	0			
1,2,3-Trichloropropane	194.7	10	200	0	97.4	75-125	0			
1,2,4-Trichlorobenzene	192.1	10	200	0	96	70-135	0			
1,2,4-Trimethylbenzene	566	10	200	378.1	94	75-130	0			
1,2-Dibromo-3-chloropropane	157.9	10	200	0	79	60-130	0			
1,2-Dibromoethane	253.1	10	200	0	127	67-155	0			
1,2-Dichlorobenzene	187.5	10	200	0	93.8	70-130	0			
1,2-Dichloroethane	172.5	10	200	0	86.2	78-125	0			
1,2-Dichloropropane	197.5	10	200	0	98.8	75-125	0			
1,3,5-Trimethylbenzene	289.9	10	200	92.9	98.5	75-130	0			
1,3-Dichlorobenzene	192.5	10	200	0	96.2	75-130	0			
1,4-Dichlorobenzene	186.9	10	200	0	93.4	75-130	0			
2-Butanone	183.8	50	200	0	91.9	55-150	0			
2-Hexanone	169.1	50	200	0	84.6	60-135	0			
4-Methyl-2-pentanone	217.7	10	200	0	109	77-178	0			
Acetone	370.6	100	200	0	185	60-160	0			S
Acrylonitrile	178.9	10	200	0	89.4	60-140	0			
Benzene	1524	10	200	1474	25.4	85-125	0			SEO
Bromochloromethane	193	10	200	0	96.5	72-141	0			
Bromodichloromethane	191.2	10	200	0	95.6	75-125	0			
Bromoform	153.7	10	200	0	76.8	60-125	0			
Bromomethane	180.1	10	200	0	90	30-185	0			
Carbon disulfide	202.8	10	200	0	101	60-165	0			
Carbon tetrachloride	201.7	10	200	0	101	65-140	0			
Chlorobenzene	196.5	10	200	0	98.2	80-120	0			
Chloroethane	203.7	10	200	0	102	50-140	0			
Chloroform	207.4	10	200	0	104	80-130	0			
Chloromethane	195.6	10	200	0	97.8	46-148	0			
cis-1,2-Dichloroethene	196.4	10	200	0	98.2	75-134	0			
cis-1,3-Dichloropropene	185.7	10	200	0	92.8	70-130	0			
Dibromochloromethane	160.3	10	200	0	80.2	60-115	0			
Dibromomethane	199.4	10	200	0	99.7	85-125	0			
Dichlorodifluoromethane	215.2	10	200	0	108	20-120	0			
Diethyl ether	182.5	10	200	0	91.2	70-130	0			
Ethylbenzene	2541	10	200	2477	32.2	76-123	0			SEO
Hexachloroethane	181.2	10	200	0	90.6	50-124	0			
Isopropylbenzene	282.5	10	200	86.2	98.2	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

m,p-Xylene	1468	20	400	1135	83.3	75-130	0	
Methyl iodide	324.6	10	200	0	162	60-160	0	S
Methyl tert-butyl ether	191.9	10	200	0	96	68-129	0	
Methylene chloride	194.9	50	200	0	97.4	75-140	0	
Naphthalene	620.5	50	200	467.4	76.6	55-160	0	
n-Propylbenzene	493.5	10	200	308.8	92.4	76-116	0	
o-Xylene	205.7	10	200	22.8	91.4	80-125	0	
Styrene	202.5	10	200	0	101	83-137	0	
Tetrachloroethene	216.9	10	200	0	108	68-166	0	
Toluene	297.9	10	200	110.2	93.8	85-125	0	
trans-1,2-Dichloroethene	207.7	10	200	0	104	80-140	0	
trans-1,3-Dichloropropene	163.1	10	200	0	81.6	56-132	0	
trans-1,4-Dichloro-2-butene	143.5	20	200	0	71.8	46-118	0	
Trichlorofluoromethane	198.8	10	200	0	99.4	60-140	0	
Vinyl chloride	187.6	10	200	0	93.8	50-136	0	
Xylenes, Total	1674	30	600	1158	86	80-126	0	
Surr: 1,2-Dichloroethane-d4	*196.6*	0	*200*	0	*98.3*	*75-120*	0	
Surr: 4-Bromofluorobenzene	*200.7*	0	*200*	0	*100*	*80-110*	0	
Surr: Dibromofluoromethane	*194.8*	0	*200*	0	*97.4*	*85-115*	0	
Surr: Toluene-d8	*200.1*	0	*200*	0	*100*	*85-110*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

MSD Sample ID: **1803906-16A MSD** Units: **µg/L** Analysis Date: **03/16/18 09:46 PM**
Client ID: Run ID: **VMS7_180316A** SeqNo: **4938872** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	203.6	10	200	0	102	73-114	199.6	1.98	30	
1,1,1-Trichloroethane	213.5	10	200	0	107	75-130	203.9	4.6	30	
1,1,2,2-Tetrachloroethane	198.7	10	200	0	99.4	75-130	188.9	5.06	30	
1,1,2-Trichloroethane	195.8	10	200	0	97.9	75-125	185.9	5.19	30	
1,1-Dichloroethane	310.1	10	200	0	155	75-133	287.8	7.46	30	S
1,1-Dichloroethene	213.8	10	200	0	107	70-145	210	1.79	30	
1,2,3-Trichloropropane	205.4	10	200	0	103	75-125	194.7	5.35	30	
1,2,4-Trichlorobenzene	193.7	10	200	0	96.8	70-135	192.1	0.829	30	
1,2,4-Trimethylbenzene	578.7	10	200	378.1	100	75-130	566	2.22	30	
1,2-Dibromo-3-chloropropane	171.4	10	200	0	85.7	60-130	157.9	8.2	30	
1,2-Dibromoethane	256.5	10	200	0	128	67-155	253.1	1.33	30	
1,2-Dichlorobenzene	203.2	10	200	0	102	70-130	187.5	8.04	30	
1,2-Dichloroethane	176.4	10	200	0	88.2	78-125	172.5	2.24	30	
1,2-Dichloropropane	196	10	200	0	98	75-125	197.5	0.762	30	
1,3,5-Trimethylbenzene	310.6	10	200	92.9	109	75-130	289.9	6.89	30	
1,3-Dichlorobenzene	197.4	10	200	0	98.7	75-130	192.5	2.51	30	
1,4-Dichlorobenzene	189.8	10	200	0	94.9	75-130	186.9	1.54	30	
2-Butanone	197.3	50	200	0	98.6	55-150	183.8	7.08	30	
2-Hexanone	184.6	50	200	0	92.3	60-135	169.1	8.76	30	
4-Methyl-2-pentanone	227	10	200	0	114	77-178	217.7	4.18	30	
Acetone	362.3	100	200	0	181	60-160	370.6	2.26	30	S
Acrylonitrile	187.5	10	200	0	93.8	60-140	178.9	4.69	30	
Benzene	1551	10	200	1474	38.6	85-125	1524	1.72	30	SEO
Bromochloromethane	201.9	10	200	0	101	72-141	193	4.51	30	
Bromodichloromethane	191.6	10	200	0	95.8	75-125	191.2	0.209	30	
Bromoform	155.2	10	200	0	77.6	60-125	153.7	0.971	30	
Bromomethane	198.5	10	200	0	99.2	30-185	180.1	9.72	30	
Carbon disulfide	207.1	10	200	0	104	60-165	202.8	2.1	30	
Carbon tetrachloride	207	10	200	0	104	65-140	201.7	2.59	30	
Chlorobenzene	201.4	10	200	0	101	80-120	196.5	2.46	30	
Chloroethane	204.3	10	200	0	102	50-140	203.7	0.294	30	
Chloroform	208.7	10	200	0	104	80-130	207.4	0.625	30	
Chloromethane	201.2	10	200	0	101	46-148	195.6	2.82	30	
cis-1,2-Dichloroethene	200.8	10	200	0	100	75-134	196.4	2.22	30	
cis-1,3-Dichloropropene	190.3	10	200	0	95.2	70-130	185.7	2.45	30	
Dibromochloromethane	164.1	10	200	0	82	60-115	160.3	2.34	30	
Dibromomethane	204.4	10	200	0	102	85-125	199.4	2.48	30	
Dichlorodifluoromethane	223.3	10	200	0	112	20-120	215.2	3.69	30	
Diethyl ether	187.3	10	200	0	93.6	70-130	182.5	2.6	30	
Ethylbenzene	2625	10	200	2477	74.3	76-123	2541	3.26	30	SEO
Hexachloroethane	198.3	10	200	0	99.2	50-124	181.2	9.01	30	
Isopropylbenzene	290.2	10	200	86.2	102	80-127	282.5	2.69	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R231832** Instrument ID **VMS7** Method: **SW8260B**

m,p-Xylene	1492	20	400	1135	89.3	75-130	1468	1.64	30	
Methyl iodide	327.4	10	200	0	164	60-160	324.6	0.859	30	S
Methyl tert-butyl ether	196	10	200	0	98	68-129	191.9	2.11	30	
Methylene chloride	197.2	50	200	0	98.6	75-140	194.9	1.17	30	
Naphthalene	664.8	50	200	467.4	98.7	55-160	620.5	6.89	30	
n-Propylbenzene	512.1	10	200	308.8	102	76-116	493.5	3.7	30	
o-Xylene	217	10	200	22.8	97.1	80-125	205.7	5.35	30	
Styrene	205.5	10	200	0	103	83-137	202.5	1.47	30	
Tetrachloroethene	217.4	10	200	0	109	68-166	216.9	0.23	30	
Toluene	302.1	10	200	110.2	96	85-125	297.9	1.4	30	
trans-1,2-Dichloroethene	211.4	10	200	0	106	80-140	207.7	1.77	30	
trans-1,3-Dichloropropene	168.2	10	200	0	84.1	56-132	163.1	3.08	30	
trans-1,4-Dichloro-2-butene	150.3	20	200	0	75.2	46-118	143.5	4.63	30	
Trichlorofluoromethane	207.9	10	200	0	104	60-140	198.8	4.48	30	
Vinyl chloride	196.2	10	200	0	98.1	50-136	187.6	4.48	30	
Xylenes, Total	1709	30	600	1158	91.9	80-126	1674	2.1	30	
Surr: 1,2-Dichloroethane-d4	*195.8*	0	*200*	0	*97.9*	*75-120*	196.6	*0.408*	*30*	
Surr: 4-Bromofluorobenzene	*204*	0	*200*	0	*102*	*80-110*	200.7	*1.63*	*30*	
Surr: Dibromofluoromethane	*198.2*	0	*200*	0	*99.1*	*85-115*	194.8	*1.73*	*30*	
Surr: Toluene-d8	*192.6*	0	*200*	0	*96.3*	*85-110*	200.1	*3.82*	*30*	

The following samples were analyzed in this batch: 1803902-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

MBLK	Sample ID: **VBLKW1-180316-R231850**				Units: **µg/L**			Analysis Date: **03/16/18 03:18 PM**		
Client ID:		Run ID: **VMS6_180316A**			SeqNo: **4938414**		Prep Date:		DF: **1**	

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1,2-Trichlorotrifluoroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	1.0								
1,2-Dibromoethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Acrylonitrile	ND	1.0								
Benzene	ND	1.0								
Bromochloromethane	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
Diethyl ether	ND	1.0								
Ethylbenzene	ND	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

Hexachloroethane	ND	1.0					
Isopropylbenzene	ND	1.0					
m,p-Xylene	ND	2.0					
Methyl iodide	ND	1.0					
Methyl tert-butyl ether	ND	1.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Propylbenzene	ND	1.0					
o-Xylene	ND	1.0					
Styrene	ND	1.0					
Tetrachloroethene	ND	1.0					
Toluene	ND	1.0					
trans-1,2-Dichloroethene	ND	1.0					
trans-1,3-Dichloropropene	ND	1.0					
trans-1,4-Dichloro-2-butene	ND	2.0					
Trichloroethene	ND	1.0					
Trichlorofluoromethane	ND	1.0					
Vinyl acetate	ND	5.0					
Vinyl chloride	ND	1.0					
Xylenes, Total	ND	3.0					
Surr: 1,2-Dichloroethane-d4	*22.22*	0	*20*	0	*111*	*75-120*	0
Surr: 4-Bromofluorobenzene	*19.36*	0	*20*	0	*96.8*	*80-110*	0
Surr: Dibromofluoromethane	*20.73*	0	*20*	0	*104*	*85-115*	0
Surr: Toluene-d8	*19.9*	0	*20*	0	*99.5*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

LCS Sample ID: **VLCSW1-180316-R231850** Units: **µg/L** Analysis Date: **03/16/18 02:03 PM**
Client ID: Run ID: **VMS6_180316A** SeqNo: **4938413** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.68	1.0	20	0	93.4	73-114	0			
1,1,1-Trichloroethane	19.57	1.0	20	0	97.8	75-130	0			
1,1,2,2-Tetrachloroethane	21.22	1.0	20	0	106	75-130	0			
1,1,2-Trichloroethane	20.17	1.0	20	0	101	75-125	0			
1,1-Dichloroethane	20.61	1.0	20	0	103	75-133	0			
1,1-Dichloroethene	20.92	1.0	20	0	105	70-145	0			
1,2,3-Trichloropropane	19.86	1.0	20	0	99.3	75-125	0			
1,2,4-Trichlorobenzene	17.22	1.0	20	0	86.1	70-135	0			
1,2,4-Trimethylbenzene	19.39	1.0	20	0	97	75-130	0			
1,2-Dibromo-3-chloropropane	20.13	1.0	20	0	101	60-130	0			
1,2-Dibromoethane	21.57	1.0	20	0	108	67-155	0			
1,2-Dichlorobenzene	18.16	1.0	20	0	90.8	70-130	0			
1,2-Dichloroethane	19.84	1.0	20	0	99.2	78-125	0			
1,2-Dichloropropane	19.31	1.0	20	0	96.6	75-125	0			
1,3,5-Trimethylbenzene	19.24	1.0	20	0	96.2	75-130	0			
1,3-Dichlorobenzene	17.8	1.0	20	0	89	75-130	0			
1,4-Dichlorobenzene	17.83	1.0	20	0	89.2	75-130	0			
2-Butanone	23.16	5.0	20	0	116	55-150	0			
2-Hexanone	21.35	5.0	20	0	107	60-135	0			
4-Methyl-2-pentanone	28.89	1.0	20	0	144	77-178	0			
Acetone	21.82	10	20	0	109	60-160	0			
Acrylonitrile	21.39	1.0	20	0	107	60-140	0			
Benzene	19.26	1.0	20	0	96.3	85-125	0			
Bromochloromethane	20.94	1.0	20	0	105	72-141	0			
Bromodichloromethane	19.48	1.0	20	0	97.4	75-125	0			
Bromoform	19.45	1.0	20	0	97.2	60-125	0			
Bromomethane	14.49	1.0	20	0	72.4	30-185	0			
Carbon disulfide	20.2	1.0	20	0	101	60-165	0			
Carbon tetrachloride	19.52	1.0	20	0	97.6	65-140	0			
Chlorobenzene	18.24	1.0	20	0	91.2	80-120	0			
Chloroethane	17.33	1.0	20	0	86.6	50-140	0			
Chloroform	19.68	1.0	20	0	98.4	80-130	0			
Chloromethane	9.68	1.0	20	0	48.4	46-148	0			
cis-1,2-Dichloroethene	19.92	1.0	20	0	99.6	75-134	0			
cis-1,3-Dichloropropene	19.51	1.0	20	0	97.6	70-130	0			
Dibromochloromethane	19	1.0	20	0	95	60-115	0			
Dibromomethane	19.91	1.0	20	0	99.6	85-125	0			
Dichlorodifluoromethane	12.54	1.0	20	0	62.7	20-120	0			
Diethyl ether	20.08	1.0	20	0	100	70-130	0			
Ethylbenzene	18.75	1.0	20	0	93.8	76-123	0			
Hexachloroethane	18.34	1.0	20	0	91.7	50-124	0			
Isopropylbenzene	18.57	1.0	20	0	92.8	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	39.08	2.0	40	0	97.7	75-130	0
Methyl iodide	15.05	1.0	20	0	75.2	60-160	0
Methyl tert-butyl ether	20.42	1.0	20	0	102	68-129	0
Methylene chloride	21.33	5.0	20	0	107	75-140	0
Naphthalene	16.06	5.0	20	0	80.3	55-160	0
n-Propylbenzene	18.26	1.0	20	0	91.3	76-116	0
o-Xylene	19.34	1.0	20	0	96.7	80-125	0
Styrene	19.98	1.0	20	0	99.9	83-137	0
Tetrachloroethene	17.99	1.0	20	0	90	68-166	0
Toluene	18.93	1.0	20	0	94.6	85-125	0
trans-1,2-Dichloroethene	20.64	1.0	20	0	103	80-140	0
trans-1,3-Dichloropropene	20.01	1.0	20	0	100	56-132	0
trans-1,4-Dichloro-2-butene	19.14	2.0	20	0	95.7	46-118	0
Trichloroethene	18.35	1.0	20	0	91.8	84-130	0
Trichlorofluoromethane	17.99	1.0	20	0	90	60-140	0
Vinyl chloride	14.79	1.0	20	0	74	50-136	0
Xylenes, Total	58.42	3.0	60	0	97.4	80-126	0
Surr: 1,2-Dichloroethane-d4	*20.62*	0	*20*	0	*103*	*75-120*	0
Surr: 4-Bromofluorobenzene	*20.19*	0	*20*	0	*101*	*80-110*	0
Surr: Dibromofluoromethane	*20.48*	0	*20*	0	*102*	*85-115*	0
Surr: Toluene-d8	*20.45*	0	*20*	0	*102*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

MS Sample ID: **1803902-02A MS** Units: **µg/L** Analysis Date: **03/17/18 12:03 PM**
Client ID: **VP-8** Run ID: **VMS6_180316A** SeqNo: **4938427** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1951	100	2000	0	97.6	73-114	0			
1,1,1-Trichloroethane	2154	100	2000	0	108	75-130	0			
1,1,2,2-Tetrachloroethane	2162	100	2000	0	108	75-130	0			
1,1,2-Trichloroethane	2040	100	2000	0	102	75-125	0			
1,1-Dichloroethane	2349	100	2000	0	117	75-133	0			
1,1-Dichloroethene	2434	100	2000	0	122	70-145	0			
1,2,3-Trichloropropane	2018	100	2000	0	101	75-125	0			
1,2,4-Trichlorobenzene	1480	100	2000	0	74	70-135	0			
1,2,4-Trimethylbenzene	1956	100	2000	0	97.8	75-130	0			
1,2-Dibromo-3-chloropropane	1954	100	2000	0	97.7	60-130	0			
1,2-Dibromoethane	2187	100	2000	0	109	67-155	0			
1,2-Dichlorobenzene	1729	100	2000	0	86.4	70-130	0			
1,2-Dichloroethane	2142	100	2000	0	107	78-125	0			
1,2-Dichloropropane	2156	100	2000	0	108	75-125	0			
1,3,5-Trimethylbenzene	1953	100	2000	0	97.6	75-130	0			
1,3-Dichlorobenzene	1684	100	2000	0	84.2	75-130	0			
1,4-Dichlorobenzene	1698	100	2000	0	84.9	75-130	0			
2-Butanone	2483	500	2000	0	124	55-150	0			
2-Hexanone	2153	500	2000	0	108	60-135	0			
4-Methyl-2-pentanone	3019	100	2000	0	151	77-178	0			
Acetone	2144	1,000	2000	0	107	60-160	0			
Acrylonitrile	2200	100	2000	0	110	60-140	0			
Benzene	2120	100	2000	0	106	85-125	0			
Bromochloromethane	2232	100	2000	0	112	72-141	0			
Bromodichloromethane	2117	100	2000	0	106	75-125	0			
Bromoform	1930	100	2000	0	96.5	60-125	0			
Bromomethane	1016	100	2000	0	50.8	30-185	0			
Carbon disulfide	2112	100	2000	0	106	60-165	0			
Carbon tetrachloride	2128	100	2000	0	106	65-140	0			
Chlorobenzene	1883	100	2000	0	94.2	80-120	0			
Chloroethane	2143	100	2000	0	107	50-140	0			
Chloroform	2237	100	2000	0	112	80-130	0			
Chloromethane	1353	100	2000	0	67.6	46-148	0			
cis-1,2-Dichloroethene	4045	100	2000	1837	110	75-134	0			
cis-1,3-Dichloropropene	2028	100	2000	0	101	70-130	0			
Dibromochloromethane	1919	100	2000	0	96	60-115	0			
Dibromomethane	2077	100	2000	0	104	85-125	0			
Dichlorodifluoromethane	1478	100	2000	0	73.9	20-120	0			
Diethyl ether	2186	100	2000	0	109	70-130	0			
Ethylbenzene	1950	100	2000	0	97.5	76-123	0			
Hexachloroethane	1747	100	2000	0	87.4	50-124	0			
Isopropylbenzene	1921	100	2000	0	96	80-127	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	4064	200	4000	0	102	75-130	0
Methyl iodide	1651	100	2000	0	82.6	60-160	0
Methyl tert-butyl ether	2204	100	2000	0	110	68-129	0
Methylene chloride	2493	500	2000	44	122	75-140	0
Naphthalene	1542	500	2000	0	77.1	55-160	0
n-Propylbenzene	1858	100	2000	0	92.9	76-116	0
o-Xylene	2062	100	2000	0	103	80-125	0
Styrene	2102	100	2000	0	105	83-137	0
Tetrachloroethene	2270	100	2000	434	91.8	68-166	0
Toluene	2024	100	2000	0	101	85-125	0
trans-1,2-Dichloroethene	2267	100	2000	0	113	80-140	0
trans-1,3-Dichloropropene	1993	100	2000	0	99.6	56-132	0
trans-1,4-Dichloro-2-butene	1881	200	2000	0	94	46-118	0
Trichloroethene	4845	100	2000	2961	94.2	84-130	0
Trichlorofluoromethane	2013	100	2000	0	101	60-140	0
Vinyl chloride	1788	100	2000	0	89.4	50-136	0
Xylenes, Total	6126	300	6000	0	102	80-126	0
Surr: 1,2-Dichloroethane-d4	*2109*	0	*2000*	0	*105*	*75-120*	0
Surr: 4-Bromofluorobenzene	*2082*	0	*2000*	0	*104*	*80-110*	0
Surr: Dibromofluoromethane	*2042*	0	*2000*	0	*102*	*85-115*	0
Surr: Toluene-d8	*2021*	0	*2000*	0	*101*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ERM, Inc
Work Order: 1803902
Project: GE Riverview (0442424)

QC BATCH REPORT

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

MSD Sample ID: **1803902-02A MSD** Units: **µg/L** Analysis Date: **03/17/18 12:28 PM**
Client ID: **VP-8** Run ID: **VMS6_180316A** SeqNo: **4938428** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	2033	100	2000	0	102	73-114	1951	4.12	30	
1,1,1-Trichloroethane	2213	100	2000	0	111	75-130	2154	2.7	30	
1,1,2,2-Tetrachloroethane	2211	100	2000	0	111	75-130	2162	2.24	30	
1,1,2-Trichloroethane	2043	100	2000	0	102	75-125	2040	0.147	30	
1,1-Dichloroethane	2346	100	2000	0	117	75-133	2349	0.128	30	
1,1-Dichloroethene	2459	100	2000	0	123	70-145	2434	1.02	30	
1,2,3-Trichloropropane	2058	100	2000	0	103	75-125	2018	1.96	30	
1,2,4-Trichlorobenzene	1724	100	2000	0	86.2	70-135	1480	15.2	30	
1,2,4-Trimethylbenzene	2193	100	2000	0	110	75-130	1956	11.4	30	
1,2-Dibromo-3-chloropropane	1958	100	2000	0	97.9	60-130	1954	0.204	30	
1,2-Dibromoethane	2178	100	2000	0	109	67-155	2187	0.412	30	
1,2-Dichlorobenzene	1918	100	2000	0	95.9	70-130	1729	10.4	30	
1,2-Dichloroethane	2163	100	2000	0	108	78-125	2142	0.976	30	
1,2-Dichloropropane	2183	100	2000	0	109	75-125	2156	1.24	30	
1,3,5-Trimethylbenzene	2167	100	2000	0	108	75-130	1953	10.4	30	
1,3-Dichlorobenzene	1896	100	2000	0	94.8	75-130	1684	11.8	30	
1,4-Dichlorobenzene	1865	100	2000	0	93.2	75-130	1698	9.37	30	
2-Butanone	2302	500	2000	0	115	55-150	2483	7.57	30	
2-Hexanone	2177	500	2000	0	109	60-135	2153	1.11	30	
4-Methyl-2-pentanone	2927	100	2000	0	146	77-178	3019	3.09	30	
Acetone	2185	1,000	2000	0	109	60-160	2144	1.89	30	
Acrylonitrile	2239	100	2000	0	112	60-140	2200	1.76	30	
Benzene	2151	100	2000	0	108	85-125	2120	1.45	30	
Bromochloromethane	2276	100	2000	0	114	72-141	2232	1.95	30	
Bromodichloromethane	2140	100	2000	0	107	75-125	2117	1.08	30	
Bromoform	2037	100	2000	0	102	60-125	1930	5.39	30	
Bromomethane	1390	100	2000	0	69.5	30-185	1016	31.1	30	R
Carbon disulfide	2183	100	2000	0	109	60-165	2112	3.31	30	
Carbon tetrachloride	2184	100	2000	0	109	65-140	2128	2.6	30	
Chlorobenzene	1986	100	2000	0	99.3	80-120	1883	5.32	30	
Chloroethane	2223	100	2000	0	111	50-140	2143	3.66	30	
Chloroform	2261	100	2000	0	113	80-130	2237	1.07	30	
Chloromethane	1837	100	2000	0	91.8	46-148	1353	30.3	30	R
cis-1,2-Dichloroethene	4061	100	2000	1837	111	75-134	4045	0.395	30	
cis-1,3-Dichloropropene	2080	100	2000	0	104	70-130	2028	2.53	30	
Dibromochloromethane	1973	100	2000	0	98.6	60-115	1919	2.77	30	
Dibromomethane	2136	100	2000	0	107	85-125	2077	2.8	30	
Dichlorodifluoromethane	1497	100	2000	0	74.8	20-120	1478	1.28	30	
Diethyl ether	2211	100	2000	0	111	70-130	2186	1.14	30	
Ethylbenzene	2100	100	2000	0	105	76-123	1950	7.41	30	
Hexachloroethane	1911	100	2000	0	95.6	50-124	1747	8.97	30	
Isopropylbenzene	2118	100	2000	0	106	80-127	1921	9.75	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R231850** Instrument ID **VMS6** Method: **SW8260B**

m,p-Xylene	4365	200	4000	0	109	75-130	4064	7.14	30
Methyl iodide	1932	100	2000	0	96.6	60-160	1651	15.7	30
Methyl tert-butyl ether	2210	100	2000	0	110	68-129	2204	0.272	30
Methylene chloride	2530	500	2000	44	124	75-140	2493	1.47	30
Naphthalene	1698	500	2000	0	84.9	55-160	1542	9.63	30
n-Propylbenzene	2108	100	2000	0	105	76-116	1858	12.6	30
o-Xylene	2179	100	2000	0	109	80-125	2062	5.52	30
Styrene	2216	100	2000	0	111	83-137	2102	5.28	30
Tetrachloroethene	2409	100	2000	434	98.8	68-166	2270	5.94	30
Toluene	2078	100	2000	0	104	85-125	2024	2.63	30
trans-1,2-Dichloroethene	2322	100	2000	0	116	80-140	2267	2.4	30
trans-1,3-Dichloropropene	2033	100	2000	0	102	56-132	1993	1.99	30
trans-1,4-Dichloro-2-butene	1949	200	2000	0	97.4	46-118	1881	3.55	30
Trichloroethene	4930	100	2000	2961	98.4	84-130	4845	1.74	30
Trichlorofluoromethane	2114	100	2000	0	106	60-140	2013	4.89	30
Vinyl chloride	1956	100	2000	0	97.8	50-136	1788	8.97	30
Xylenes, Total	6544	300	6000	0	109	80-126	6126	6.6	30
Surr: 1,2-Dichloroethane-d4	*2130*	0	*2000*	0	*106*	*75-120*	2109	*0.991*	*30*
Surr: 4-Bromofluorobenzene	*2111*	0	*2000*	0	*106*	*80-110*	2082	*1.38*	*30*
Surr: Dibromofluoromethane	*2085*	0	*2000*	0	*104*	*85-115*	2042	*2.08*	*30*
Surr: Toluene-d8	*2016*	0	*2000*	0	*101*	*85-110*	2021	*0.248*	*30*

The following samples were analyzed in this batch: 1803902-01A 1803902-02A 1803902-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
Spring City, PA +1 610 948 4903
Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 46587

ALS Project Manager: [illegible] ALS Work Order #: 1803902

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	GE Riverview	A	VOCs
Work Order		Project Number	0442424	B	
Company Name	ERM, Inc	Bill To Company	ERM, Inc	C	
Send Report To	Dan Rusiecki	Invoice Attn	Debra Mose/Accounts Payable	D	
Address	3352 128th Avenue	Address	One Continental Towers 1701 Golf Road, Suite 1- 1000	E	
City/State/Zip	Holland, MI 49424	City/State/Zip	Rolling Meadows, IL 60008	F	
Phone	(616) 399-3500	Phone		G	
Fax	(616) 399-3777	Fax		H	
e-Mail Address		e-Mail Address		I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	VP-7	3/14/18	1210	GW	HCl	3	X										
2	VP-8	3/14/18	1245	GW	HCl	3	X										
3	Trip Blank			W	HCl	1	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Dan Rusiecki / Dan Rusiecki

Shipment Method: Hand

Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☒ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other

Results Due Date:

Relinquished by: Dan Rusiecki	Date: 3/15/18	Time: 8:30am	Received by:	
Relinquished by:	Date: 3/15/18	Time: 08:30	Received by (Laboratory):	
Logged by (Laboratory): DFS	Date: 3/15/18	Time: 0930	Checked by (Laboratory): [illegible]	

Notes:

Cooler ID	Cooler Temp
SRZ	4.0 c

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **ERM-HOLL** Date/Time Received: **15-Mar-18 08:30**

Work Order: **1803902** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 15-Mar-18 (Date) Reviewed by: Tom Bramish (eSignature) 15-Mar-18 (Date)

Matrices: Groundwater

Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.0/4.0 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/15/2018 9:47:54 AM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

June 12, 2018

Mr. James Van Nortwick
General Electric Corporate
Global Operations, Environment, Health & Safety
3726 North Wayne Avenue
Chicago, Illinois 60613

Dear Mr. Van Nortwick:

SUBJECT: Vapor Intrusion Screening Assessment Initial Report Acceptance; Former General Electric Apparatus Center, 18075 Krause Street, Riverview, Michigan; MID 050 616 622

The Michigan Department of Environmental Quality (MDEQ), Waste Management and Radiological Protection Division (WMRPD), reviewed the April 27, 2018, *Vapor Intrusion Screening Assessment Initial Report* (Report). The Report was submitted by Environmental Resources Management, on behalf of General Electric Company (GE), for the subject facility. The Report was reviewed for compliance with the approved *Vapor Intrusion Screening Assessment Work Plan* and Part 111, Hazardous Waste Management, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and its administrative rules.

Based on the review, the MDEQ concurs that no additional work is necessary to evaluate the vapor intrusion exposure pathway at this time. Given the extent of soil removal conducted at the site, there appears to be no on-site source remaining to which the elevated concentrations of cis-1,2 dichloroethene (cis-1,2 DCE), tetrachloroethene (PCE), and trichloroethene (TCE), in shallow groundwater at perimeter locations, VP-5, VP-7, and VP-8, can be attributed.

Currently, there are no buildings on-site. GE proposes to place a restrictive covenant on the property to restrict its use to industrial and to identify the presence of other residual contamination. GE must also include in the restrictive covenant the cis-1,2 DCE, PCE, and TCE constituents, their concentrations, and locations remaining on-site; and a prohibition on building construction without further evaluation of the vapor intrusion pathway or the installation of engineering controls. Enclosed is the WMRPD current vapor intrusion language for Part 111 restrictive covenants.

Please proceed with revising the Corrective Measures Implementation Report. Please include the additional work completed to evaluate the vapor intrusion exposure pathway and the supplemental polychlorinated biphenyls excavation and disposal work conducted in the exterior yard.

Due to the unknown origination of the groundwater contamination in the areas VP-5, VP-7, and VP-8, the WMRPD will notify the MDEQ, Remediation and Redevelopment Division, Southeast Michigan District Office, of the groundwater contamination for further evaluation.

If you have any questions, please contact me at 517-284-6574; tysonk@michigan.gov; or MDEQ, WMRPD, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Kimberly M. Tyson, P.E.
Senior Environmental Engineer
Hazardous Waste Section
Waste Management and Radiological
Protection Division

Enclosure
cc: Ms. Tracy Kecskemeti, MDEQ
Mr. Paul Owens, MDEQ
Mr. James Day, MDEQ
Mr. Joseph Rogers, MDEQ
Mr. Joseph Victory, MDEQ
Corrective Action File

Martin Ryan

From: Tyson, Kimberly (DEQ) <TYSONK@michigan.gov>
Sent: Thursday, June 21, 2018 8:51 AM
To: Martin Ryan
Cc: Van Nortwick, James W. (GE Corporate) (james.vannortwick@ge.com); Thomas O'Connell; Rogers, Joseph (DEQ); Victory, Joseph (DEQ)
Subject: RE: Riverview

Yes. Guidance on Soil Gas Well Abandonment may be found in Appendix F-1, Section 2.4 of the DEQ Guidance Document for the Vapor Intrusion Pathway. The link is provided below:

https://www.michigan.gov/documents/deq/deq-rrd-VIGuidanceDoc-May2013_422550_7.pdf

Well decommission procedures for groundwater monitoring wells may be found in ASTM standards D5299-14. This requirement is found in Part 111 rule R 299.9612(b).

Should you have any questions, please let me know.

Kimberly M. Tyson, P.E.
Environmental Engineer Specialist
Michigan Department of Environmental Quality
Waste Management and Radiological Protection Division
Phone: (517) 284-6574
Fax: (517) 373-4797
Email: tysonk@michigan.gov

From: Martin Ryan <Martin.Ryan@erm.com>
Sent: Wednesday, June 20, 2018 3:08 PM
To: Tyson, Kimberly (DEQ) <TYSONK@michigan.gov>
Cc: Van Nortwick, James W. (GE Corporate) (james.vannortwick@ge.com) <james.vannortwick@ge.com>; Thomas O'Connell <Thomas.OConnell@erm.com>
Subject: RE: Riverview

Thank you, Kimberly. Would you like us to properly plug and abandon the shallow wells and vapor points we installed in Jan and Mar 2018 as part of VI screening and include that information in the forthcoming revised CMI Report?
Regards,
Marty

From: Tyson, Kimberly (DEQ) <TYSONK@michigan.gov>
Sent: Wednesday, June 20, 2018 8:53 AM
To: Martin Ryan <Martin.Ryan@erm.com>
Subject: RE: Riverview

Attached is the signed letter. It probably went in the mail on June 13.

Kimberly M. Tyson, P.E.
Environmental Engineer Specialist
Michigan Department of Environmental Quality
Waste Management and Radiological Protection Division
Phone: (517) 284-6574
Fax: (517) 373-4797
Email: tysonk@michigan.gov

From: Martin Ryan <Martin.Ryan@erm.com>
Sent: Tuesday, June 19, 2018 5:04 PM
To: Tyson, Kimberly (DEQ) <TYSONK@michigan.gov>
Subject: RE: Riverview

Hi Kimberly,
When do you think the letter will be sent? (We have not seen it.)
Thanks for your help.
Sincerely,
Marty

From: Tyson, Kimberly (DEQ) <TYSONK@michigan.gov>
Sent: Tuesday, June 12, 2018 2:02 PM
To: Van Nortwick, James W. (GE Corporate) <james.vannortwick@ge.com>
Cc: Martin Ryan <Martin.Ryan@erm.com>
Subject: RE: Riverview

Yes, I signed the letter today.

Kimberly M. Tyson, P.E.
Environmental Engineer Specialist
Michigan Department of Environmental Quality
Waste Management and Radiological Protection Division

Phone: (517) 284-6574
Fax: (517) 373-4797
Email: tysonk@michigan.gov

From: Van Nortwick, James W. (GE Corporate) <james.vannortwick@ge.com>
Sent: Tuesday, June 12, 2018 8:53 AM
To: Tyson, Kimberly (DEQ) <TYSONK@michigan.gov>
Cc: Martin Ryan <Martin.Ryan@erm.com>
Subject: Riverview

Kimberly – Marty is preparing a proposal to revise/finalize the report; however, he wants to wait until you send your VI approval letter. Is it coming soon? Thanks -- Jim

James W Van Nortwick, Ph.D., PE
Technical Environmental Engineering Expert
Global Operations, Environment, Health & Safety
GE

T 312.513.4588
james.vannortwick@ge.com

3726 North Wayne Avenue
Chicago, IL 60613

GE Imagination at Work