June 7, 2019

Mr. Paul Bucholtz
Michigan Department of Environment, Great Lakes, and Energy
Remediation and Redevelopment Division
Constitution Hall
525 West Allegan Street
Lansing, MI 48909

RE: 2019 Semiannual Groundwater Sampling Report
RACER Trust Hemphill Road Industrial Land, Burton, Michigan
FILE: 15388 / 72203

Dear Mr. Bucholtz:

This letter serves as a Summary Report for the first semiannual 2019 groundwater sampling event conducted in April 2019 at the Revitalizing Auto Communities Environmental Response (RACER) Trust Hemphill Road Industrial Land (HRIL) facility located in Burton, Michigan (Site). Semiannual groundwater sampling was conducted to document groundwater quality for the Site.

GROUNDWATER SAMPLING

The first semiannual 2019 groundwater sampling was performed utilizing the following sampling protocols.

Prior to sampling, water level measurements were collected from monitoring wells at the Site and the offsite wells. Monitoring well locations are shown on **Figure 1**. Monitoring well construction details are listed on **Table 1** and groundwater elevation data is included on **Table 2**. The groundwater elevations observed during the sampling events are within the historical range of static groundwater measurements for the Site.

As reported in the June 2011 Groundwater Investigation Report for the Site, based on the distance between wells and the Site geology and previous waste disposal, the shallow saturated flow zones observed at the Site do not appear to be continuous across the Site and do not appear to be connected. Groundwater in the shallow zone appears to flow predominantly toward the southwest as shown on **Figure 2**. Groundwater in the drift (deep) unit appears to flow in a northerly direction as shown on **Figure 3**.

The shallow and deep groundwater elevations are depicted on **Figure 2** (Shallow/April 2019), and **Figure 3** (Deep/April 2019).

Groundwater samples for the semiannual 2019 sampling event were collected during April 29, 2019 through May 2, 2019. Samples were collected from nine on-site monitoring wells and five off-site monitoring wells. The nine on-site monitoring wells are: OBG MW-1S, OBG MW-2S, OBG MW-2D, OBG MW-3S, OBG MW-5S (screened in fill material), OBG MW-6S, OBG MW-6D, OBG MW-7S, and OBG MW-7D. The five off-site monitoring wells are: OBG OS MW-1, OBG OS MW-2, OBG OS MW-3, OBG OS MW-4, and OBG OS MW-5 (all of which are screened in fill material).

Samples were not collected from wells MW-401 and MW-403 (installed by others) based on the screen lengths of these wells being over 10 ft in length. Also, groundwater samples were not collected from OBG

MW-4S and OBG MW-10 based on the presence of Light Non-Aqueous Phase Liquid (LNAPL) in these wells. Samples were not collected from wells OBG MW-8, OBG MW-9, and OBG MW-11 as these were installed in June 2016 for LNAPL assessment. Due to the viscous LNAPL coating the interface probe of the measuring instrument, it was difficult to acquire an accurate measurement of the LNAPL thickness in monitoring wells MW-401, OBG MW-4S, OBG MW-10. LNAPL was not detected in monitoring wells MW-403, OBG MW-8, OBG MW-9, and OBG MW-11. A summary of the LNAPL gauging results are presented in **Table 3**.

Groundwater sampling was performed in accordance with EGLE Operational Memorandum No.2-Attachment 5 for low-flow sampling. Low-flow groundwater sampling was performed using polyethylene sample tubing lowered approximately to the midpoint of the well screen and connected to a peristaltic pump. The tubing was then attached to a flow-through cell attached to a physical parameter measurement instrument capable of measuring temperature, conductivity, pH, dissolved oxygen (DO), and oxidation-reduction potential (ORP). Turbidity was also measured with a Hach® colorimeter.

Once the pump was turned on, the well was purged at a rate that produced less than 0.3 ft of drawdown in the well, except for wells OBG MW-1S, OBG MW-2S/D, OBG MW-5S, OBG MW-6S/D, OBG MW-7S, OBG OS MW-1, and OBG OS MW-2. For these wells, the purge rate was maintained at a maximum of 100 milliliters per minute [ml/min]; however, a drawdown of more than 0.30 ft was observed.

Measurements of water quality (*i.e.*, physical parameters) were recorded on a groundwater sampling log. Purging continued until the water quality parameters stabilized (within the guidelines of the USEPA Low Stress Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells) over three consecutive 5-minute intervals. Once stabilized, the pumping rate was reduced and the flow-through cell was disconnected. Groundwater samples were collected from each well directly into laboratory supplied containers. The sample container selection and preservation techniques followed EGLE Operational Memorandum No.2-Attachment 4.

Groundwater sample logs are included in **Exhibit A**.

The samples were labeled, packed on ice, and shipped via courier under routine chain-of-custody protocols to Merit Laboratories, Inc. (Merit) of East Lansing, Michigan. The groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260, and total and dissolved metals (arsenic, barium, lead, selenium, and zinc) by EPA Method 200.8.

Quality Assurance/Quality Control (QA/QC) samples were collected during each sampling event in accordance with EGLE Operational Memorandum No.2-Attachment 5. QA/QC samples included a blind duplicate, collocated sample, field blank, equipment blank, and matrix spike/matrix spike duplicate (MS/MSD) set. One trip blank was submitted with each cooler shipment containing samples collected for VOC analyses.

The blind duplicate was collected from OBG MW-5S and the collocated sample was collected from OBG MW-6D. The duplicate and collocated sample results compared closely with the original sample results indicating good reproducibility; expect for zinc was detected at (dissolved - 61 µg/l) in the OBG MW-6D sample, but was not detected in the collocated sample. Furthermore, the various blank samples collected during sampling were non-detect indicating that cross-contamination was not an issue for this sampling event.

GROUNDWATER SAMPLING RESULTS

Analytical results for this event indicate VOCs were not detected above method detection limits, except at offsite monitoring wells OBG OS MW-4 and OBG OS MW-5 (which are both screened in fill material).

Offsite monitoring well OBG OS MW-4 had the following detections above method detection limits:

- Chlorobenzene (9 µg/l), isopropylbenzene (7 µg/l), n-propylbenzene (12 µg/l), n-butylbenzene (2 µg/l), sec-butylbenzene (3 µg/l), 1,2,4-trimethylbenzene (2 µg/l), 1,2,3-trimethylbenzene (3 µg/l), 1,4-dichlorobenzene (5 µg/l), naphthalene (19 µg/l), and 2-methylnaphthalene (44 µg/l).

Offsite monitoring well OBG OS MW-5 had the following detection above method detection limit:

- Chlorobenzene (7 µg/l) and 1,4-Dichlorobenzene (3 µg/l).

These concentrations are below the EGLE Part 201 Generic Residential Drinking Water criteria. The concentrations for isopropylbenzene (7 µg/l) and naphthalene (19 µg/l) at OBG OS MW-4 were above the EGLE Site Specific Residential Groundwater Not in Contact Criteria of (0.60 µg/l) isopropylbenzene and (4.2 µg/l) naphthalene. The analytical results for the first semiannual event are summarized on **Table 4** and the groundwater analytical data sheets are included in **Exhibit B**.

The samples were analyzed for both total and dissolved metals. During the April sampling the dissolved sample results were within 20 percent of the total sample results, but are, with few exceptions, consistently lower than their total sample results. Therefore, it appears turbidity, or more accurately, suspended solids play a role in the higher total metals results.

Groundwater analytical results for inorganic analysis indicate selenium and zinc were not detected above the method detection limits or detections were below the EGLE Part 201 Generic Residential Drinking Water criteria. Lead concentrations were below the method detection limit except at OBG OS MW-2 which had a total lead result of 4 µg/l.

Analytical results for arsenic levels at or above the EGLE Part 201 Generic Residential and Non-Residential Drinking Water criterion (10 µg/l) are as follows (results are total unless otherwise noted and only the highest of the total or dissolved sample results for each represented well is reported herein):

- Onsite monitoring wells: OBG MW-2S (14 µg/l), OBG MW-2D (28 µg/l), OBG MW- 6S (dissolved - 13 µg/l), OBG MW- 6D (dissolved - 22 µg/l), OBG MW-7S (11 µg/l), and OBG MW-7D (dissolved - 31 µg/l)
- Offsite monitoring wells: OBG OS MW-1 (31 µg/l), OBG OS MW-2 (50 µg/l), and OBG OS MW-3 (18 µg/l).

It is well documented in the literature that arsenic can be released under anoxic (reducing) conditions, and it is well documented that naturally occurring arsenic is present in Genesee County in the glacial soils/groundwater. There is a noticeable trend in the groundwater data whereby the deeper wells in each of the nested pairs onsite (OBG MW-2S/D, OBG MW-6S/D, and OBG MW-7S/D) consistently have higher arsenic results, which also tend to have lower ORP and DO results and are presumably under greater reducing conditions than the shallower wells. There does not appear to be a direct relationship between higher arsenic concentrations and wells screened in fill material, as onsite well OBG MW-5S had a low arsenic concentration and the offsite wells had inconsistent results. Therefore, the fill material does not appear to be the source of the elevated arsenic concentrations. In addition, the fill material is not causing highly reducing conditions to mobilize the arsenic.

Analytical results for barium levels above the EGLE Part 201 Generic Residential and Non-Residential Drinking Water criterion (2,000 µg/l) are as follows:

- Offsite monitoring wells: OBG OS MW-5 (2,370 µg/l).

Barium can also be released under anoxic (reducing) conditions; however, to a lesser extent than arsenic. Unlike arsenic, there does not appear to be a relationship between the ORP and DO readings in the wells and barium concentrations. However, there appears to be a relationship between wells screened in fill material and higher barium concentrations. Onsite well OBG MW-5S, and offsite wells OBG OS-MW-1, OBG

OS-MW-4, and OBG OS-MW-5 had the highest barium results during this event and have consistently had higher results than the wells screened in native soils.

A figure depicting the April 2019 groundwater results above EGLE criteria is included as **Figure 4**.

SUMMARY

The results of the April 2019 semiannual groundwater sampling event are comparable to the previous results. Concentrations of arsenic were detected above the EGLE Part 201 Nonresidential Drinking Water criteria in samples collected from both onsite and offsite wells and both wells screened in fill material and native soils. Therefore, the concentrations appear to be related to the reducing conditions that are not caused by the fill material. In addition, barium and lead concentrations were detected in offsite wells above the EGLE Part 201 Nonresidential Drinking Water criteria, which may be related to the fill material in these areas. On-site exceedances can be addressed with a resource use restriction for Site groundwater in the Remedial Action Plan (RAP).

Concentrations of VOCs were only detected above method detection limits at two offsite wells (OBG OS-MW-4 and OBG OS-MW-5) during the April 2019 event. These detections are below their EGLE Part 201 Nonresidential Drinking Water criteria.

Review of the groundwater analytical data for this semiannual sampling event and historical data indicates groundwater constituents and concentrations at offsite wells (OBG OS MW-4 and OBG OS MW-5) are mostly different than those detected at the HRIL Site. Therefore, impacted groundwater and fill material at the HRIL Site does not appear to be the source for groundwater impacts offsite to the east or south.

As presented in **Table 3**, the LNAPL thickness was considered immeasurable in wells MW-401, OBG MW-4S, and OBG MW-10 due to either minimal thickness of LNAPL or LNAPL coating the probe not allowing for an accurate measurement.

If you have questions or would like additional information, please contact me at (313) 333-0211 or David Favero at (734) 879-9525.

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC.

Clifford Scott Yantz

Clifford S. Yantz
Senior Hydrogeologist

cc: David Favero - RACER Trust
Kevin Schneider - OBG

ATTACHMENTS:

Table 1- Monitoring Well Construction Details
Table 2- Groundwater Elevation Data
Table 3- LNAPL Observation/Removal Logs
Table 4- Groundwater Analytical Results- April 2019

Figure 1- Monitoring Well Locations
Figure 2- Shallow Groundwater Elevation Contours – April 2019
Figure 3- Deep Groundwater Elevation Contours – April 2019
Figure 4- Groundwater Analytical Results- April 2019

Exhibit A- Groundwater Sampling Logs – April 2019
Exhibit B- Groundwater Analytical Data April 2019

Tables

Table 1
Monitoring Well Construction Details
Hemphill Road Industrial Land
Burton, Michigan

Well	Completion Date	Installed By: Consultant/ Driller	Total Well Depth *	Surface Elevation (ft amsl)	Top of Casing Elevation (ft amsl)	Casing Diameter (inches)	Screened Interval Elevations	Estimated Sand/Gravel Pack Elevations
Onsite Wells								
OBG MW-1S	29-Nov-10	O'Brien & Gere / Boart Longyear	27.20	774.9	777.64	2	755.44-750.44	757.44-749.44
OBG MW-2S	30-Nov-10	O'Brien & Gere / Boart Longyear	20.30	772.9	775.33	2	760.03-755.03	762.03-754.03
OBG MW-2D	30-Nov-10	O'Brien & Gere / Boart Longyear	38.50	772.8	775.19	2	741.69-736.69	743.69-735.69
OBG MW-3	30-Nov-10	O'Brien & Gere / Boart Longyear	27.70	774.3	777.31+	2	754.54-749.54	756.54-748.54
OBG MW-4S	30-Nov-10	O'Brien & Gere / Boart Longyear	27.70	766.3	769.15	2	746.45-741.45	748.45-740.45
OBG MW-5S	1-Dec-10	O'Brien & Gere / Boart Longyear	20.30	768.5	771.00	2	755.7-750.7 **	757.7-749.7
OBG MW-6S	1-Dec-10	O'Brien & Gere / Boart Longyear	19.10	769.70	772.70	2	758.6-753.6	760.6-752.6
OBG MW-6D	1-Dec-10	O'Brien & Gere / Boart Longyear	44.40	769.65	772.69	2	733.29-728.29	735.29-727.29
OBG MW-7S	2-Dec-10	O'Brien & Gere / Boart Longyear	17.70	763.56	766.30	2	753.6-748.6	755.6-747.6
OBG MW-7D	2-Dec-10	O'Brien & Gere / Boart Longyear	47.80	763.55	766.36	2	723.56-718.56	725.56-717.56
OBG MW-8	9-Jun-16	O'Brien & Gere/ Stock	22.46	768.14	771.21	2	759.23- 749.23	761.14-749.14
OBG MW-9	9-Jun-16	O'Brien & Gere/ Stock	22.65	767.91	770.93	2	758.78-748.78	760.91-748.91
OBG MW-10	9-Jun-16	O'Brien & Gere/ Stock	21.00	766.17	768.96	2	758.5-748.5	760.17- 748.17
OBG MW-11	9-Jun-16	O'Brien & Gere/ Stock	20.00	772.60	775.64	2	762.6- 752.6	764.6-744.6

Table 1
Monitoring Well Construction Details
Hemphill Road Industrial Land
Burton, Michigan

Well	Completion Date	Installed By: Consultant/ Driller	Total Well Depth *	Surface Elevation (ft amsl)	Top of Casing Elevation (ft amsl)	Casing Diameter (inches)	Screened Interval Elevations	Estimated Sand/Gravel Pack Elevations
Offsite Wells								
OBG OS MW-1	11-Nov-13	O'Brien & Gere / Cascade	30.15	774.09	776.57	2	756.42-746.42 **	754.42-745.42
OBG OS MW-2	11-Nov-13	O'Brien & Gere / Cascade	30.29	774.02	776.67	2	756.38-746.38 **	754.38-744.42
OBG OS MW-3	9-Jun-14	O'Brien & Gere / Cascade	30.29	779.78	782.89	2	762.59-752.59 **	764.59-751.59
OBG OS MW-4	9-Jun-14	O'Brien & Gere / Cascade	27.76	776.09	779.00	2	761.20-751.20 **	763.20-750.20
OBG OS MW-5	10-Jun-14	O'Brien & Gere / Cascade	28.15	776.45	779.38	2	761.18-751.18 **	763.18-750.18

Notes:

1) ft amsl - feet above mean sea level (NGVD 1929)
2) ft TOC - feet below Top of Casing
3) Wells are polyvinylchloride (PVC), schedule 40, screen slot size 0.010 inch.
4) * - Total well depth as measured from TOC
   Elevation referenced to NGVD 1929
5) + - OBG MW-3 was repaired, and the TOC resurveyed, on 9/2/2011.
6) ** - Monitoring well is screened in waste fill.

Table 2
Groundwater Elevation Data
Hemphill Road Industrial Land
Burton, Michigan

Well	Top of Casing Elevation (ft amsl)	Depth To Water 12/20/2010 (ft btoc)	Static Water Elevation 12/20/2010 (ft amsl)	Depth To Water 2/25/2011 (ft btoc)	Static Water Elevation 2/25/2011 (ft amsl)	Depth To Water 3/22/2012 (ft btoc)	Static Water Elevation 3/22/2012 (ft amsl)	Depth To Water 6/13/2012 (ft btoc)	Static Water Elevation 6/13/2012 (ft amsl)	Depth To Water 9/20/2012 (ft btoc)	Static Water Elevation 9/20/2012 (ft amsl)	Depth To Water 12/18/2012 (ft btoc)	Static Water Elevation 12/18/2012 (ft amsl)	Depth To Water 4/16/2013 (ft btoc)	Static Water Elevation 4/16/2013 (ft amsl)
OBG MW-1S	**777.64**	13.80	763.84	13.50	764.14	12.47	765.17	12.70	764.94	13.03	764.61	13.18	764.46	12.28	765.36
OBG MW-2S	**775.33**	11.59	763.74	11.02	764.31	10.41	764.92	10.45	764.88	10.26	765.07	11.03	764.30	9.76	765.57
OBG MW-2D	**775.19**	22.02	753.17	21.80	753.39	20.16	755.03	20.45	754.74	22.34	752.85	21.26	753.93	20.57	754.62
OBG MW-3 **	**777.31**	23.00	754.24	22.95	754.29	22.72	754.59	22.69	754.62	22.69	754.62	22.87	754.44	22.77	754.54
OBG MW-4S	**769.15**	--	--	--	--	14.30	754.85	14.55	754.60	14.52	754.63	14.6	754.57	14.35	754.80
OBG MW-5S	**771.00**	15.97	755.03	15.80	755.20	15.48	755.52	15.75	755.25	15.80	755.20	15.93	755.07	15.47	755.53
OBG MW-6S	**772.70**	14.72	757.98	14.18	758.52	13.81	758.89	14.31	758.39	14.84	757.86	14.62	758.08	12.42	760.28
OBG MW-6D	**772.69**	19.61	753.08	19.46	753.23	17.99	754.70	18.51	754.18	20.11	752.58	18.96	753.73	18.04	754.65
OBG MW-7S	**766.30**	8.68	757.62	8.10	758.20	8.12	758.18	8.36	757.94	8.59	757.71	8.37	757.93	7.26	759.04
OBG MW-7D	**766.36**	14.40	751.96	14.23	752.13	12.55	753.81	13.09	753.27	14.70	751.66	13.73	752.63	12.95	753.41
OBG MW-8	**771.21**													--	--
OBG MW-9	**770.93**													--	--
OBG MW-10	**768.96**													--	--
OBG MW-11	**775.64**													--	--
OBG OS MW-1	**776.57**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG OS MW-2	**776.67**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG OS MW-3	**782.89**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG OS MW-4	**779.00**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG OS MW-5	**779.38**	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1) ft amsl - feet above mean sea level (NGVD 1929).
2) ft btoc - feet below top of casing.
3) --' denotes depth to water not collected.
4) ** - OBG MW-3 was repaired, and the TOC resurveyed, on 9/2/2011.
   The previous TOC was 777.24.

Table 2
Groundwater Elevation Data
Hemphill Road Industrial Land
Burton, Michigan

Well	Top of Casing Elevation (ft amsl)	Depth To Water 10/15/2013 (ft btoc)	Static Water Elevation 10/15/2013 (ft amsl)	Depth To Water 12/10/2013 (ft btoc)	Static Water Elevation 12/10/2013 (ft amsl)	Depth To Water 4/24/2014 (ft btoc)	Static Water Elevation 4/24/2014 (ft amsl)	Depth To Water 7/2/2014 (ft btoc)	Static Water Elevation 7/2/2014 (ft amsl)	Depth To Water 7/28/2014 (ft btoc)	Static Water Elevation 7/28/2014 (ft amsl)	Depth To Water 9/11/2014 (ft btoc)	Static Water Elevation 9/11/2014 (ft amsl)	Depth To Water 5/28/2015 (ft btoc)	Static Water Elevation 5/28/2015 (ft amsl)
OBG MW-1S	**777.64**	13.60	764.04	--	--	12.69	764.95	--	--	--	--	12.44	765.20	12.64	765.00
OBG MW-2S	**775.33**	11.48	763.85	--	--	10.32	765.01	--	--	--	--	10.29	765.04	10.59	764.74
OBG MW-2D	**775.19**	21.28	753.91	--	--	20.21	754.98	--	--	--	--	20.42	754.77	19.90	755.29
OBG MW-3 **	**777.31**	22.78	754.53	--	--	22.73	754.58	--	--	--	--	22.54	754.77	22.85	754.46
OBG MW-4S	**769.15**	--	--	--	--	--	--	--	--	--	--	14.6	754.58	--	--
OBG MW-5S	**771.00**	15.80	755.20	--	--	15.59	755.41	--	--	--	--	15.84	755.16	15.61	755.39
OBG MW-6S	**772.70**	14.94	757.76	--	--	13.79	758.91	--	--	--	--	14.49	758.21	14.22	758.48
OBG MW-6D	**772.69**	19.21	753.48	--	--	18.10	754.59	--	--	--	--	18.06	754.63	17.54	755.15
OBG MW-7S	**766.30**	8.85	757.45	--	--	7.81	758.49	--	--	--	--	8.37	757.93	8.25	758.05
OBG MW-7D	**766.36**	13.93	752.43	--	--	12.64	753.72	--	--	--	--	12.91	753.45	12.35	754.01
OBG MW-8	**771.21**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG MW-9	**770.93**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG MW-10	**768.96**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG MW-11	**775.64**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OBG OS MW-1	**776.57**	--	--	22.10	754.47	--	--	--	--	--	--	22.17	754.40	21.95	754.62
OBG OS MW-2	**776.67**	--	--	21.43	755.24	--	--	--	--	--	--	21.58	755.09	21.34	755.33
OBG OS MW-3	**782.89**	--	--	--	--	--	--	25.39	757.50	25.52	757.37	25.89	757.00	25.99	756.90
OBG OS MW-4	**779.00**	--	--	--	--	--	--	24.29	754.71	24.34	754.66	24.48	754.52	24.40	754.60
OBG OS MW-5	**779.38**	--	--	--	--	--	--	24.71	754.67	24.79	754.59	24.91	754.47	24.82	754.56

Notes:

1) ft amsl - feet above mean sea level (NGVD 1929).
2) ft btoc - feet below top of casing.
3) --' denotes depth to water not collected.
4) ** - OBG MW-3 was repaired, and the TOC resurveyed, on 9/2/2011.
   The previous TOC was 777.24.
5) Water levels from newly installed wells OBG MW-8/9/10/11 collected on 9/9/2016.

Table 2
Groundwater Elevation Data
Hemphill Road Industrial Land
Burton, Michigan

Well	Top of Casing Elevation (ft amsl)	Depth To Water 10/29/2015 (ft btoc)	Static Water Elevation 10/29/2015 (ft amsl)	Depth To Water 4/14/2016 (ft btoc)	Static Water Elevation 4/14/2016 (ft amsl)	Depth To Water 9/9/2016 (ft btoc)	Static Water Elevation 9/9/2016 (ft amsl)	Depth To Water 10/21/2016 (ft btoc)	Static Water Elevation 10/21/2016 (ft amsl)	Depth To Water 4/10/2016 (ft btoc)	Static Water Elevation 4/10/2016 (ft amsl)	Depth To Water 10/17/2017 (ft btoc)	Static Water Elevation 10/17/2017 (ft amsl)	Depth To Water 4/17/2018 (ft btoc)	Static Water Elevation 4/17/2018 (ft amsl)	Depth To Water 10/15/2018 (ft btoc)	Static Water Elevation 10/15/2018 (ft amsl)	Depth To Water 4/29/2019 (ft btoc)	Static Water Elevation 4/29/2019 (ft amsl)
OBG MW-1S	**777.64**	12.75	764.89	11.45	766.19	--	--	12.89	764.75	11.28	766.36	13.05	764.59	11.08	766.56	12.35	765.29	11.67	765.97
OBG MW-2S	**775.33**	10.77	764.56	9.16	766.17	--	--	10.38	764.95	8.83	766.50	10.93	764.40	8.91	766.42	10.19	765.14	9.19	766.14
OBG MW-2D	**775.19**	19.94	755.25	18.83	756.36	--	--	21.02	754.17	18.83	756.36	20.65	754.54	18.94	756.25	20.14	755.05	18.81	756.38
OBG MW-3 **	**777.31**	22.77	754.54	22.47	754.84	--	--	23.05	754.26	23.00	754.31	23.15	754.16	22.93	754.38	23.23	754.08	23.00	754.31
OBG MW-4S	**769.15**	--	--	--	--	--	--	--	--	13.90	755.25	14.55	754.60	13.85	755.30	14.29	754.86	14.30	754.85
OBG MW-5S	**771.00**	15.40	755.60	15.17	755.83	--	--	15.80	755.20	14.90	756.10	15.91	755.09	15.20	755.80	15.66	755.34	15.49	755.51
OBG MW-6S	**772.70**	14.72	757.98	12.70	760.00	--	--	14.53	758.17	11.71	760.99	14.90	757.80	12.36	760.34	14.38	758.32	12.86	759.84
OBG MW-6D	**772.69**	17.70	754.99	16.99	755.70	--	--	17.96	754.73	16.60	756.09	18.30	754.39	16.70	755.99	17.95	754.74	16.49	756.20
OBG MW-7S	**766.30**	8.43	757.87	7.27	759.03	--	--	8.14	758.16	6.70	759.60	8.17	758.13	6.55	759.75	8.13	758.17	7.18	759.12
OBG MW-7D	**766.36**	12.44	753.92	11.35	755.01	--	--	13.47	752.89	11.34	755.02	13.51	752.85	11.43	754.93	12.56	753.80	11.24	755.12
OBG MW-8	**771.21**	--	--	--	--	16.30	754.91	--	--	15.08	756.13	16.40	754.81	15.16	756.05	15.63	755.58	15.45	755.76
OBG MW-9	**770.93**	--	--	--	--	16.42	754.51	--	--	14.45	756.48	16.19	754.74	14.44	756.49	15.65	755.28	14.44	756.49
OBG MW-10	**768.96**	--	--	--	--	--	--	--	--	12.99	755.97	14.30	754.66	12.99	755.97	13.61	755.35	13.22	755.74
OBG MW-11	**775.64**	--	--	--	--	18.30	757.34	--	--	15.79	759.85	17.90	757.74	16.29	759.35	17.15	758.49	16.20	759.44
OBG OS MW-1	**776.57**	22.24	754.33	21.40	755.17	--	--	21.71	754.86	21.25	755.32	22.10	754.47	21.29	755.28	21.98	754.59	21.20	755.37
OBG OS MW-2	**776.67**	21.73	754.94	20.49	756.18	--	--	21.18	755.49	20.34	756.33	21.48	755.19	20.30	756.37	21.24	755.43	20.35	756.32
OBG OS MW-3	**782.89**	26.06	756.83	25.10	757.79	--	--	26.33	756.56	24.76	758.13	26.35	756.54	25.05	757.84	26.16	756.73	24.95	757.94
OBG OS MW-4	**779.00**	24.25	754.75	23.91	755.09	--	--	24.52	754.48	23.85	755.15	24.70	754.30	23.99	755.01	24.61	754.39	24.10	754.90
OBG OS MW-5	**779.38**	24.67	754.71	24.33	755.05	--	--	24.94	754.44	24.25	755.13	25.06	754.32	24.36	755.02	24.97	754.41	24.47	754.91

Notes:

1) ft amsl - feet above mean sea level (NGVD 1929).
2) ft btoc - feet below top of casing.
3) --' denotes depth to water not collected.
4) ** - OBG MW-3 was repaired, and the TOC resurveyed, on 9/2/2011.
   The previous TOC was 777.24.
5) Water levels from newly installed wells OBG MW-8/9/10/11 collected on 9/9/2016.

Table 3
LNAPL Observation/Removal Logs
Hemphill Road Industrial Land
Burton, Michigan

Date	Approximate Depth to LNAPL (ft)	Depth to Water (ft)	Approximate LNAPL Thickness (ft)	Approximate Volume of LNAPL Removed	Absorbent Sock Installed
OBG MW-4S (Installled 11-2010)					
12/20/2010	IM	--	4.00	--	yes
2/25/2011	14.4	18.4	4.00	--	yes
5/13/2011	14.5	18.63	4.13	3-4 gal.	yes
6/24/2011	14.19	15.18	0.99	1-2 gal.	yes
7/29/2011	14.3	14.62	0.32	0.3-0.5 gal	yes
9/2/2011	14.43	14.51	0.08	<0.2 gal	yes
3/22/2012	IM	14.3	--	--	yes
6/13/2012	IM	14.55	--	--	yes
9/21/2012	IM	14.52	--	--	yes
12/18/2012	IM	14.6	--	--	yes
4/16/2013	14.35	14.91	0.56	<0.2 gal	yes
10/15/2013	14.49	14.6	0.11	--	yes
4/24/2014	IM	--	--	--	yes
10/14/2014	IM	--	--	--	yes
5/28/2015	IM	--	--	--	
10/29/2015	IM	14.49	--	--	
4/13/2016	IM	--	--	--	
9/9/2016*	IM	14.61	--	--	
10/21/2016*	IM	14.6	--	--	
2/15/2017*	IM	14.29	--	--	
4/11/2017*	13.9	14.4	0.50	--	
10/18/2017	IM	14.55	--	--	
4/18/2018	IM	13.85	--	--	
10/17/2018	IM	14.51	--	--	
4/30/2019	IM	14.3	--	--	
OBG MW-10 (Installed 6-2016)					
6/10/2016	IM	13.85	--	--	
9/9/2016	14.28	14.47	0.19	<0.2 gal	
10/20/2016	13.95	14.5	0.55	<0.5 gal	
2/15/2017	IM	13.61	--	--	
4/11/2017	IM	12.99	--	--	
10/18/2017	IM	14.3	--	--	
4/18/2018	IM	12.99	--	--	
10/17/2018	IM	14.09	--	--	
4/30/2019	IM	13.22	--	--	
MW-401 (Installed 5-1988)					
5/18/1988	UNK	12	--	--	
1st quarter 1993	UNK	15.26	--	--	
2nd quarter 1993	UNK	15.53	--	--	
3rd quarter 1993	UNK	15.57	--	--	
4th quarter 1993	UNK	15.85	--	--	
1st quarter 1994	UNK	15.66	--	--	
2nd quarter 1994	UNK	15.57	--	--	
3rd quarter 1994	UNK	15.69	--	--	
4th quarter 1994	UNK	15.52	--	--	
1st quarter 1995	UNK	15.5	--	--	
2nd quarter 1995	UNK	15.6	--	--	
4th quarter 1995	UNK	16.1	--	--	

Table 3
LNAPL Observation/Removal Logs
Hemphill Road Industrial Land
Burton, Michigan

Date	Approximate Depth to LNAPL (ft)	Depth to Water (ft)	Approximate LNAPL Thickness (ft)	Approximate Volume of LNAPL Removed	Absorbent Sock Installed
MW-401 (Continued) (Installed 5-1988)					
1st quarter 1996	UNK	13.72	--	--	
2nd quarter 1996	UNK	13.7	--	--	
3rd quarter 1996	UNK	13.77	--	--	
4th quarter 1996	UNK	13.65	--	--	
5/7/1998	IM	15	--	--	
12/13/1999	14.45	14.95	0.50	--	yes
2/22/2000	IM	14.65	--	--	yes
10/30/2000	IM	13.95	--	--	yes
3/28/2001	IM	14.64	--	--	yes
7/2/2001	IM	13.31	0.50	--	yes
9/31/2001	IM	13.3	--	--	yes
12/27/2001	IM	14.74	0.25	--	
4/4/2002	IM	14.64	--	--	
3/20/2003	IM	14.98	0.30	<0.5 gal	
6/20/2003	IM	13.6	--	<0.2 gal	
9/30/2003	IM	13.74	--	<0.2 gal	
12/16/2003	IM	13.6	--	<0.2 gal	
3/10/2004	IM	13.47	--	<0.2 gal	
6/10/2004	IM	17.3	--	<0.2 gal	
9/15/2004	IM	17.41	--	<0.2 gal	
12/21/2004	IM	13.51	--	<0.2 gal	
3/31/2005	IM	17.8	--	<0.2 gal	
6/8/2005	IM	14.65	--	<0.2 gal	
9/29/2005	IM	14.1	--	<0.2 gal	
12/29/2005	IM	13.81	--	<0.2 gal	
3/22/2012	IM	14.7	--	--	
6/13/2012	IM	13.3	--	<0.2 gal	
9/20/2012	IM	13.3	--	<0.2 gal	
12/18/2012	13.2	13.3	0.10	<0.2 gal	
4/16/2013	IM	12.99	--	<0.2 gal	
10/15/2013	IM	12.99	--	<0.2 gal	
4/24/2014	IM	14.7	--	--	
10/14/2014	IM	13.13	--	--	yes
5/28/2015	IM	--	--	--	
10/29/2015	IM	--	--	--	
4/13/2016	IM	--	--	--	
9/9/2016*	13.35	14.5	1.15	Approx. 0.5 gal	
10/20/2016*	13.2	13.9	0.60	<0.2 gal	
2/15/2017*	IM	--	0.60	<0.2 gal	
4/11/2017*	13.85	14.6	0.75	<0.2 gal	
10/18/2017	IM	13.35	0.60	--	
4/18/2018	IM	--	--	--	
10/17/2018	IM	--	--	--	
4/30/2019	IM	12.8	--	--	

Notes:

1) LNAPL = denotes Light Non-Aqueous Phase Liquid.
2) Depth to LNAPL and water measured from Top-of-casing.
3) * = absorbent sock placed in well, and denotes LNAPL measurement estimated from absorbent sock liner smear.
4) IM = denotes immeasurable amount of LNAPL, no measurement could be collected either due to minimal thickness of LNAPL or LNAPL coating the probe not allowing for accurate measurement.
5) UNK = denotes unknown.

Table 4
Groundwater Analytical Results - April 2019
Hemphill Road Industrial Land
Burton, Michigan

Monitoring Well / Sample Date	Onsite Wells										EGLE Part 201 Generic Criteria		EGLE Site Specific Criteria	
	OBG MW-1S		OBG MW-2S 4/30/2019		OBG MW-2D 4/30/2019		OBG MW-3 4/30/2019		*OBG MW-5S 4/30/2019		Residential Drinking Water	Non-Residential Drinking Water	Residential GWNIC	Nonresidential GWNIC
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved				
Arsenic	<2	<2	**14**	**14**	**28**	**26**	**3**	**2**	**4**	**4**	10 (A)	10 (A)	--	--
Barium	**156**	**152**	**168**	**167**	**235**	**233**	**246**	**242**	**1,020**	**1,010**	2,000 (A)	2,000 (A)	--	--
Lead	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	4.0 (L)	4.0 (L)	--	--
Selenium	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	50 (A)	50 (A)	--	--
Zinc	<5	<5	<5	<5	**34**	<5	<5	<5	**9**	<5	2,400	5,000 (E)	--	--
Diethyl ether	<10		<10		<10		<10		<10		10 (E)	10 (E)	--	--
Acetone	<50		<50		<50		<50		<50		730	2,100	--	--
Methyl iodide	<1		<1		<1		<1		<1		NA	NA	--	--
Carbon disulfide	<5		<5		<5		<5		<5		800	2,300	--	--
tert-Methyl butyl ether (MTBE)	<5		<5		<5		<5		<5		40 (E)	40 €	250 ca	1.2E+05 ca
Acrylonitrile	<2		<2		<2		<2		<2		2.6	11	--	--
2-Butanone (MEK)	<25		<25		<25		<25		<25		13,000	38,000	--	--
Dichlorodifluoromethane	<5		<5		<5		<5		<5		1,700	4,800	--	--
Chloromethane	<5		<5		<5		<5		<5		260	1,100	--	--
Vinyl chloride	<1		<1		<1		<1		<1		2.0 (A)	2.0 (A)	0.12 (M) mut	100 ca
Bromomethane	<5		<5		<5		<5		<5		10	29	--	--
Chloroethane	<5		<5		<5		<5		<5		430	1700	--	--
Trichlorofluoromethane	<1		<1		<1		<1		<1		2,600	7,300	--	--
1,1-Dichloroethene	<1		<1		<1		<1		<1		7 (A)	7 (A)	18 nc	3,200 nc
Methylene chloride	<5		<5		<5		<5		<5		5 (A)	5 (A)	--	--
trans-1,2-Dichloroethene	<1		<1		<1		<1		<1		100 (A)	100 (A)	13 nc	3,700 nc
1,1-Dichloroethane	<1		<1		<1		<1		<1		880	2,500	4.7 ca	2,000 ca
cis-1,2-Dichloroethene	<1		<1		<1		<1		<1		70 (A)	70 (A)	3.4 nc	900 nc
Tetrahydrofuran	<90		<90		<90		<90		<90		95	270	45,000 nc	9.9E+06 nc
Chloroform	<1		<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
Bromochloromethane	<1		<1		<1		<1		<1		NA	NA	--	--
1,1,1-Trichloroethane	<1		<1		<1		<1		<1		200 (A)	200 (A)	--	--
4-Methyl-2-pentanone (MIBK)	<50		<50		<50		<50		<50		1,800	5,200	--	--
2-Hexanone	<50		<50		<50		<50		<50		1,000	2,900	--	--
Carbon tetrachloride	<1		<1		<1		<1		<1		5 (A)	5 (A)	--	--
Benzene	<1		<1		<1		<1		<1		5 (A)	5 (A)	1.0 ca	420 ca
1,2-Dichloroethane	<1		<1		<1		<1		<1		5 (A)	5 (A)	1.4 ca	620 ca
Trichloroethene	<1		<1		<1		<1		<1		5 (A)	5 (A)	7.3-02 (M)(SE) dev	78 (SE) dev
1,2-Dichloropropane	<1		<1		<1		<1		<1		5 (A)	5 (A)	--	--
Bromodichloromethane	<1		<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
Dibromomethane	<5		<5		<5		<5		<5		80	230	--	--
cis-1,3-Dichloropropene[3]	<1		<1		<1		<1		<1		8.5	35	--	--
Toluene	<1		<1		<1		<1		<1		790 (E)	790 (E)	300 (SE) st	4.2E+05 (SE) st
trans-1,3-Dichloropropene[3]	<1		<1		<1		<1		<1		8.5	35	--	--
1,1,2-Trichloroethane	<1		<1		<1		<1		<1		5.0 (A)	5.0 (A)	--	--
Tetrachloroethene	<1		<1		<1		<1		<1		5.0 (A)	5.0 (A)	1.5 (SE) st	1,200 (SE) st
trans-1,4-Dichloro-2-butene	<1		<1		<1		<1		<1		na	na	--	--
Dibromochloromethane	<5		<5		<5		<5		<5		80 (A,W)	80 (A,W)	--	--
1,2-Dibromomethane	<1		<1		<1		<1		<1		0.05 (A)	0.05 (A)	--	--
Chlorobenzene	<1		<1		<1		<1		<1		100 (A)	100 (A)	--	--
1,1,1,2-Tetrachloroethane	<1		<1		<1		<1		<1		77	320	--	--
Ethlybenzene	<1		<1		<1		<1		<1		74 (E)	74 (E)	2.8 ca	1,400 ca
p,m-Xylene[4]	<2		<2		<2		<2		<2		280 (E)	280 (E)	75 nc	23,000 nc
o-Xylene[4]	<1		<1		<1		<1		<1		280 (E)	280 (E)	75 nc	23,000 nc
Styrene	<1		<1		<1		<1		<1		100 (A)	100 (A)	--	--
Isopropylbenzene	<5		<5		<5		<5		<5		800	2,300	0.60 (M) ca	300 ca
Bromoform	<1		<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
1,1,2,2-Tetrachloroethane	<1		<1		<1		<1		<1		8.5	35	--	--
1,2,3-Trichloropropane	<1		<1		<1		<1		<1		42	120	--	--
n-Propylbenzene	<1		<1		<1		<1		<1		80	230	43 (SE) dev	52,000 (SE) dev
Bromobenzene	<1		<1		<1		<1		<1		18	50	--	--
1,3,5-Trimethylbenzene	<1		<1		<1		<1		<1		72 (E)	72 (E)	18 nc	5,900 nc
tert-Butylbenzene	<1		<1		<1		<1		<1		80	230	7.7E-02 (M) nc	25 nc
1,2,4-Trimethylbenzene	<1		<1		<1		<1		<1		63 (E)	63 (E)	--	--
sec-Butylbenzene	<1		<1		<1		<1		<1		80	230	270 nc	18,000 (S) sol
p-Isopropyltoluene	<5		<5		<5		<5		<5		NA	NA	--	--
1,3-Dichlorobenzene	<1		<1		<1		<1		<1		6.6	19	--	--
1,4-Dichlorobenzene	<1		<1		<1		<1		<1		75 (A)	75 (A)	--	--
1,2-Dichlorobenzene	<1		<1		<1		<1		<1		600 (A)	600 (A)	--	--
1,2,3-Trimethylbenzene	<1		<1		<1		<1		<1		NA	NA	--	--
n-Butylbenzene	<1		<1		<1		<1		<1		80	230	44 nc	12,000 (S) sol
Hexachloroethane	<5		<5		<5		<5		<5		7.3	21	--	--
1,2-Dibromo-3-chloropropane	<5		<5		<5		<5		<5		0.2 (A)	0.2 (A)	--	--
1,2,4-Trichlorobenzene	<5		<5		<5		<5		<5		70 (A)	70 (A)	25 nc	8,300 nc
1,2,3-Trichlorobenzene	<5		<5		<5		<5		<5		NA	NA	43 nc	15,000 nc
Naphthalene	<5		<5		<5		<5		<5		520	1500	4.2 (M) ca	2,200 ca
2-Methylnaphthalene	<5		<5		<5		<5		<5		260	750	66 nc	24,000 nc

See Page 4 for Notes

Table 4
Groundwater Analytical Results - April 2019
Hemphill Road Industrial Land
Burton, Michigan

Monitoring Well Sample Date	Onsite Wells (continued)								EGLE Part 201 Generic Criteria		EGLE Site Specific Criteria	
	OBG MW-6S 4/29/2019		OBG MW-6D 4/29/2019		OBG MW-7S 4/29/2019		OBG MW-7D 4/29/2019		Residential Drinking Water	Non-Residential Drinking Water	Residential GWNIC	Nonresidential GWNIC
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved				
Arsenic	**11**	**13**	**21**	**22**	**11**	**8**	**30**	**31**	10 (A)	10 (A)	--	--
Barium	**147**	**158**	**73**	**73**	**188**	**165**	**91**	**91**	2,000 (A)	2,000 (A)	--	--
Lead	<3	<3	<3	<3	<3	<3	<3	<3	4.0 (L)	4.0 (L)	--	--
Selenium	<5	<5	<5	<5	<5	<5	<5	<5	50 (A)	50 (A)	--	--
Zinc	<5	<5	<5	**61**	<5	**8**	**35**	<5	2,400	5,000 (E)	--	--
Diethyl ether	<10		<10		<10		<10		10 (E)	10 (E)	--	--
Acetone	<50		<50		<50		<50		730	2,100	--	--
Methyl iodide	<1		<1		<1		<1		NA	NA	--	--
Carbon disulfide	<5		<5		<5		<5		800	2,300	--	--
tert-Methyl butyl ether (MTBE)	<5		<5		<5		<5		40 (E)	40 (E)	250 ca	1.2E+05 ca
Acrylonitrile	<2		<2		<2		<2		2.6	11	--	--
2-Butanone (MEK)	<25		<25		<25		<25		13,000	38,000	--	--
Dichlorodifluoromethane	<5		<5		<5		<5		1,700	4,800	--	--
Chloromethane	<5		<5		<5		<5		260	1,100	--	--
Vinyl chloride	<1		<1		<1		<1		2.0 (A)	2.0 (A)	0.12 (M) mut	100 ca
Bromomethane	<5		<5		<5		<5		10	29	--	--
Chloroethane	<5		<5		<5		<5		430	1700	--	--
Trichlorofluoromethane	<1		<1		<1		<1		2,600	7,300	--	--
1,1-Dichloroethene	<1		<1		<1		<1		7 (A)	7 (A)	18 nc	3,200 nc
Methylene chloride	<5		<5		<5		<5		5 (A)	5 (A)	--	--
trans-1,2-Dichloroethene	<1		<1		<1		<1		100 (A)	100 (A)	13 nc	3,700 nc
1,1-Dichloroethane	<1		<1		<1		<1		880	2,500	4.7 ca	2,000 ca
cis-1,2-Dichloroethene	<1		<1		<1		<1		70 (A)	70 (A)	3.4 nc	900 nc
Tetrahydrofuran	<90		<90		<90		<90		95	270	45,000 nc	9.9E+06 nc
Chloroform	<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
Bromochloromethane	<1		<1		<1		<1		NA	NA	--	--
1,1,1-Trichloroethane	<1		<1		<1		<1		200 (A)	200 (A)	--	--
4-Methyl-2-pentanone (MIBK)	<50		<50		<50		<50		1,800	5,200	--	--
2-Hexanone	<50		<50		<50		<50		1,000	2,900	--	--
Carbon tetrachloride	<1		<1		<1		<1		5 (A)	5 (A)	--	--
Benzene	<1		<1		<1		<1		5 (A)	5 (A)	1.0 ca	420 ca
1,2-Dichloroethane	<1		<1		<1		<1		5 (A)	5 (A)	1.4 ca	620 ca
Trichloroethene	<1		<1		<1		<1		5 (A)	5 (A)	7.3-02 (M)(SE) dev	78 (SE) dev
1,2-Dichloropropane	<1		<1		<1		<1		5 (A)	5 (A)	--	--
Bromodichloromethane	<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
Dibromomethane	<5		<5		<5		<5		80	230	--	--
cis-1,3-Dichloropropene[3]	<1		<1		<1		<1		8.5	35	--	--
Toluene	<1		<1		<1		<1		790 (E)	790 (E)	300 (SE) st	4.2E+05 (SE) st
trans-1,3-Dichloropropene[3]	<1		<1		<1		<1		8.5	35	--	--
1,1,2-Trichloroethane	<1		<1		<1		<1		5.0 (A)	5.0 (A)	--	--
Tetrachloroethene	<1		<1		<1		<1		5.0 (A)	5.0 (A)	1.5 (SE) st	1,200 (SE) st
trans-1,4-Dichloro-2-butene	<1		<1		<1		<1		na	na	--	--
Dibromochloromethane	<5		<5		<5		<5		80 (A,W)	80 (A,W)	--	--
1,2-Dibromomethane	<1		<1		<1		<1		0.05 (A)	0.05 (A)	--	--
Chlorobenzene	<1		<1		<1		<1		100 (A)	100 (A)	--	--
1,1,1,2-Tetrachloroethane	<1		<1		<1		<1		77	320	--	--
Ethlybenzene	<1		<1		<1		<1		74 (E)	74 (E)	2.8 ca	1,400 ca
p,m-Xylene[4]	<2		<2		<2		<2		280 (E)	280 (E)	75 nc	23,000 nc
o-Xylene[4]	<1		<1		<1		<1		280 (E)	280 (E)	75 nc	23,000 nc
Styrene	<1		<1		<1		<1		100 (A)	100 (A)	--	--
Isopropylbenzene	<5		<5		<5		<5		800	2,300	0.60 (M) ca	300 ca
Bromoform	<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
1,1,2,2-Tetrachloroethane	<1		<1		<1		<1		8.5	35	--	--
1,2,3-Trichloropropane	<1		<1		<1		<1		42	120	--	--
n-Propylbenzene	<1		<1		<1		<1		80	230	43 (SE) dev	52,000 (SE) dev
Bromobenzene	<1		<1		<1		<1		18	50	--	--
1,3,5-Trimethylbenzene	<1		<1		<1		<1		72 (E)	72 (E)	18 nc	5,900 nc
tert-Butylbenzene	<1		<1		<1		<1		80	230	7.7E-02 (M) nc	25 nc
1,2,4-Trimethylbenzene	<1		<1		<1		<1		63 (E)	63 (E)	25 nc	8,300 nc
sec-Butylbenzene	<1		<1		<1		<1		80	230	270 nc	18,000 (S) sol
p-Isopropyltoluene	<5		<5		<5		<5		NA	NA	--	--
1,3-Dichlorobenzene	<1		<1		<1		<1		6.6	19	--	--
1,4-Dichlorobenzene	<1		<1		<1		<1		75 (A)	75 (A)	--	--
1,2-Dichlorobenzene	<1		<1		<1		<1		600 (A)	600 (A)	--	--
1,2,3-Trimethylbenzene	<1		<1		<1		<1		NA	NA	43 nc	15,000 nc
n-Butylbenzene	<1		<1		<1		<1		80	230	44 nc	12,000 (S) sol
Hexachloroethane	<5		<5		<5		<5		7.3	21	--	--
1,2-Dibromo-3-chloropropane	<5		<5		<5		<5		0.2 (A)	0.2 (A)	--	--
1,2,4-Trichlorobenzene	<5		<5		<5		<5		70 (A)	70 (A)	25 nc	8,300 nc
1,2,3-Trichlorobenzene	<5		<5		<5		<5		NA	NA	43 nc	15,000 nc
Naphthalene	<5		<5		<5		<5		520	1500	4.2 (M) ca	2,200 ca
2-Methylnaphthalene	<5		<5		<5		<5		260	750	66 nc	24,000 nc

See Page 4 for Notes

Table 4
Groundwater Analytical Results - April 2019
Hemphill Road Industrial Land
Burton, Michigan

	Offsite Wells										EGLE Part 201 Generic Criteria		EGLE Site Specific Criteria	
Monitoring Well	*OBG OS-MW-1		*OBG OS-MW-2		*OBG OS-MW-3		*OBG OS-MW-4		*OBG OS-MW-5		Residential Drinking Water	Non-Residential Drinking Water	Residential GWNIC	Nonresidential GWNIC
Sample Date	5/2/2019		5/2/2019		5/1/2019		5/1/2019		5/1/2019					
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved				
Arsenic	**31**	**28**	**50**	**41**	**18**	**17**	**3**	**3**	<2	<2	10 (A)	10 (A)	--	--
Barium	**928**	**922**	**223**	**216**	**126**	**117**	**1,170**	**1,120**	**2,370**	**2,250**	2,000 (A)	2,000 (A)	--	--
Lead	<3	<3	**4**	<3	<3	<3	<3	<3	<3	<3	4.0 (L)	4.0 (L)	--	--
Selenium	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	50 (A)	50 (A)	--	--
Zinc	<5	**7**	**10**	<5	<5	<5	<5	<5	**6**	**8**	2,400	5,000 (E)	--	--
Diethyl ether	<10		<10		<10		<10		<10		10 (E)	10 (E)	--	--
Acetone	<50		<50		<50		<50		<50		730	2,100	--	--
Methyl iodide	<1		<1		<1		<1		<1		NA	NA	--	--
Carbon disulfide	<5		<5		<5		<5		<5		800	2,300	--	--
tert-Methyl butyl ether (MTBE)	<5		<5		<5		<5		<5		40 (E)	40 (E)	250 ca	1.2E+05 ca
Acrylonitrile	<2		<2		<2		<2		<2		2.6	11	--	--
2-Butanone (MEK)	<25		<25		<25		<25		<25		13,000	38,000	--	--
Dichlorodifluoromethane	<5		<5		<5		<5		<5		1,700	4,800	--	--
Chloromethane	<5		<5		<5		<5		<5		260	1,100	--	--
Vinyl chloride	<1		<1		<1		<1		<1		2.0 (A)	2.0 (A)	0.12 (M) mut	100 ca
Bromomethane	<5		<5		<5		<5		<5		10	29	--	--
Chloroethane	<5		<5		<5		<5		<5		430	1700	--	--
Trichlorofluoromethane	<1		<1		<1		<1		<1		2,600	7,300	--	--
1,1-Dichloroethene	<1		<1		<1		<1		<1		7 (A)	7 (A)	18 nc	3,200 nc
Methylene chloride	<5		<5		<5		<5		<5		5 (A)	5 (A)	--	--
trans-1,2-Dichloroethene	<1		<1		<1		<1		<1		100 (A)	100 (A)	13 nc	3,700 nc
1,1-Dichloroethane	<1		<1		<1		<1		<1		880	2,500	4.7 ca	2,000 ca
cis-1,2-Dichloroethene	<1		<1		<1		<1		<1		70 (A)	70 (A)	3.4 nc	900 nc
Tetrahydrofuran	<90		<90		<90		<90		<90		95	270	45,000 nc	9.9E+06 nc
Chloroform	<1		<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
Bromochloromethane	<1		<1		<1		<1		<1		NA	NA	--	--
1,1,1-Trichloroethane	<1		<1		<1		<1		<1		200 (A)	200 (A)	--	--
4-Methyl-2-pentanone (MIBK)	<50		<50		<50		<50		<50		1,800	5,200	--	--
2-Hexanone	<50		<50		<50		<50		<50		1,000	2,900	--	--
Carbon tetrachloride	<1		<1		<1		<1		<1		5 (A)	5 (A)	--	--
Benzene	<1		<1		<1		<1		<1		5 (A)	5 (A)	1.0 ca	420 ca
1,2-Dichloroethane	<1		<1		<1		<1		<1		5 (A)	5 (A)	1.4 ca	620 ca
Trichloroethene	<1		<1		<1		<1		<1		5 (A)	5 (A)	7.3-02 (M)(SE) dev	78 (SE) dev
1,2-Dichloropropane	<1		<1		<1		<1		<1		5 (A)	5 (A)	--	--
Bromodichloromethane	<1		<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
Dibromomethane	<5		<5		<5		<5		<5		80	230	--	--
cis-1,3-Dichloropropene[3]	<1		<1		<1		<1		<1		8.5	35	--	--
Toluene	<1		<1		<1		<1		<1		790 (E)	790 (E)	300 (SE) st	4.2E+05 (SE) st
trans-1,3-Dichloropropene[3]	<1		<1		<1		<1		<1		8.5	35	--	--
1,1,2-Trichloroethane	<1		<1		<1		<1		<1		5.0 (A)	5.0 (A)	--	--
Tetrachloroethene	<1		<1		<1		<1		<1		5.0 (A)	5.0 (A)	1.5 (SE) st	1,200 (SE) st
trans-1,4-Dichloro-2-butene	<1		<1		<1		<1		<1		na	na	--	--
Dibromochloromethane	<5		<5		<5		<5		<5		80 (A,W)	80 (A,W)	--	--
1,2-Dibromomethane	<1		<1		<1		<1		<1		0.05 (A)	0.05 (A)	--	--
Chlorobenzene	<1		<1		<1		**9**		**7**		100 (A)	100 (A)	--	--
1,1,1,2-Tetrachloroethane	<1		<1		<1		<1		<1		77	320	--	--
Ethlybenzene	<1		<1		<1		<1		<1		74 (E)	74 (E)	2.8 ca	1,400 ca
p,m-Xylene[4]	<2		<2		<2		<2		<2		280 (E)	280 (E)	75 nc	23,000 nc
o-Xylene[4]	<1		<1		<1		<1		<1		280 (E)	280 (E)	75 nc	23,000 nc
Styrene	<1		<1		<1		<1		<1		100 (A)	100 (A)	--	--
Isopropylbenzene	<5		<5		<5		**7**		<5		800	2,300	0.60 (M) ca	300 ca
Bromoform	<1		<1		<1		<1		<1		80 (A,W)	80 (A,W)	--	--
1,1,2,2-Tetrachloroethane	<1		<1		<1		<1		<1		8.5	35	--	--
1,2,3-Trichloropropane	<1		<1		<1		<1		<1		42	120	--	--
n-Propylbenzene	<1		<1		<1		**12**		<1		80	230	43 (SE) dev	52,000 (SE) dev
Bromobenzene	<1		<1		<1		<1		<1		18	50	--	--
1,3,5-Trimethylbenzene	<1		<1		<1		<1		<1		72 (E)	72 (E)	18 nc	5,900 nc
tert-Butylbenzene	<1		<1		<1		<1		<1		80	230	7.7E-02 (M) nc	25 nc
1,2,4-Trimethylbenzene	<1		<1		<1		**2**		<1		63 (E)	63 (E)	25 nc	8,300 nc
sec-Butylbenzene	<1		<1		<1		**3**		<1		80	230	270 nc	18,000 (S) sol
p-Isopropyltoluene	<5		<5		<5		<5		<5		NA	NA	--	--
1,3-Dichlorobenzene	<1		<1		<1		<1		<1		6.6	19	--	--
1,4-Dichlorobenzene	<1		<1		<1		**5**		**3**		75 (A)	75 (A)	--	--
1,2-Dichlorobenzene	<1		<1		<1		<1		<1		600 (A)	600 (A)	--	--
1,2,3-Trimethylbenzene	<1		<1		<1		**3**		<1		NA	NA	43 nc	15,000 nc
n-Butylbenzene	<1		<1		<1		**2**		<1		80	230	44 nc	12,000 (S) sol
Hexachloroethane	<5		<5		<5		<5		<5		7.3	21	--	--
1,2-Dibromo-3-chloropropane	<5		<5		<5		<5		<5		0.2 (A)	0.2 (A)	--	--
1,2,4-Trichlorobenzene	<5		<5		<5		<5		<5		70 (A)	70 (A)	25 nc	8,300 nc
1,2,3-Trichlorobenzene	<5		<5		<5		<5		<5		NA	NA	43 nc	15,000 nc
Naphthalene	<5		<5		<5		**19**		<5		520	1500	4.2 (M) ca	2,200 ca
2-Methylnaphthalene	<5		<5		<5		**44**		<5		260	750	66 nc	24,000 nc

See Page 4 for Notes

Table 4
Groundwater Analytical Results
Hemphill Road Industrial Land
Burton, Michigan

Notes:

Exceeds EGLE Site-Specific Residential GWNIC Criteria.

Exceeds EGLE Drinking Water Criteria.

Detections highlighted in bold.

1 Units are µg/L.

2 * - indicates monitoring well is screened in fill.

3 -- No Criteria

4 Criteria are for total 1,3-Dichloropropene, values for cis and trans should be summed and compared against the appropriate criterion.

5 Criteria are for total xylenes, values for p,m- and o- should be summed and compared against the appropriate criterion.
'na' - means a criterion or value is not available or, in the case of background and CAS numbers, not applicable.

6 (GWNIC) = Groundwater Not In Contact

7 Acceptable Air Values (AAV) endpoint basis used for site-specific criterion: (ca) = Carcinogenetic; (nc) = Non-Carcinogenetic;
(dev) = Developmental; (mut) = Mutagenic cancer; (st) = Short-term (i.e., less than chronic exposure):
Agency for Toxic Substances and Disease Registry Inhalation Minimum Risk Level for Acute Inhalation
or Intermediate Inhalation exposure durations; U.S. Environmental Protection Agency Integrated Risk Information System
Reference Concentration for short-term exposure; of Air Quality Division Acute Initial Threshold Screening Level.

8 (A) - Criterion is the state of Michigan drinking water standard established pursuant toSection 5 of 1976 PA 399, MCL 325.1005.

9 (E) - Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and
Environmental Protection Act, 1994 PA 451, as

10 (L) - Criteria for lead are derived using a biologically based model, as allowed forunder Section 20120a(9) of the NREPA.
(M) - Site-specific criterion may be below target detection limits (TDL). In accordance with Sec. 20120a(10) when the TDL
for a hazardous substance is greater than the developed cleanup criterion, the criterion is the TDL.

11 (SE) - Site-specific criteria based on single event exposure; therefore, sampling methods should reflect shorter exposure scenarios.

12 (S) - Calculated health-based value exceeds the hazardous substance-specific water solubility limit;
therefore, the water solubility limit is the criterion.

13 (W) - Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the
Michigan drinking water standard of 80 µg/L.

Figures

FIGURE 1

Notes:
1) Monitoring Wells OBG MW-8, OBG MW-9, OBG MW-10, and OBG MW-11 were installed on 6/9/2016.
2) This document was developed in color. Reproduction in B/W may not represent the data as intended.
3) Background image provided by ESRI.

LEGEND

- MONITORING WELL LOCATION (SCREENED IN NATIVE SOIL)
- MONITORING WELL LOCATION (SCREENED IN FILL)
- FENCE LINE
- HEMPHILL ROAD INDUSTRIAL LAND

RACER TRUST
HEMPHILL ROAD INDUSTRIAL LAND
BURTON, MICHIGAN

MONITORING WELL LOCATIONS

0 25 50 75 100
Feet

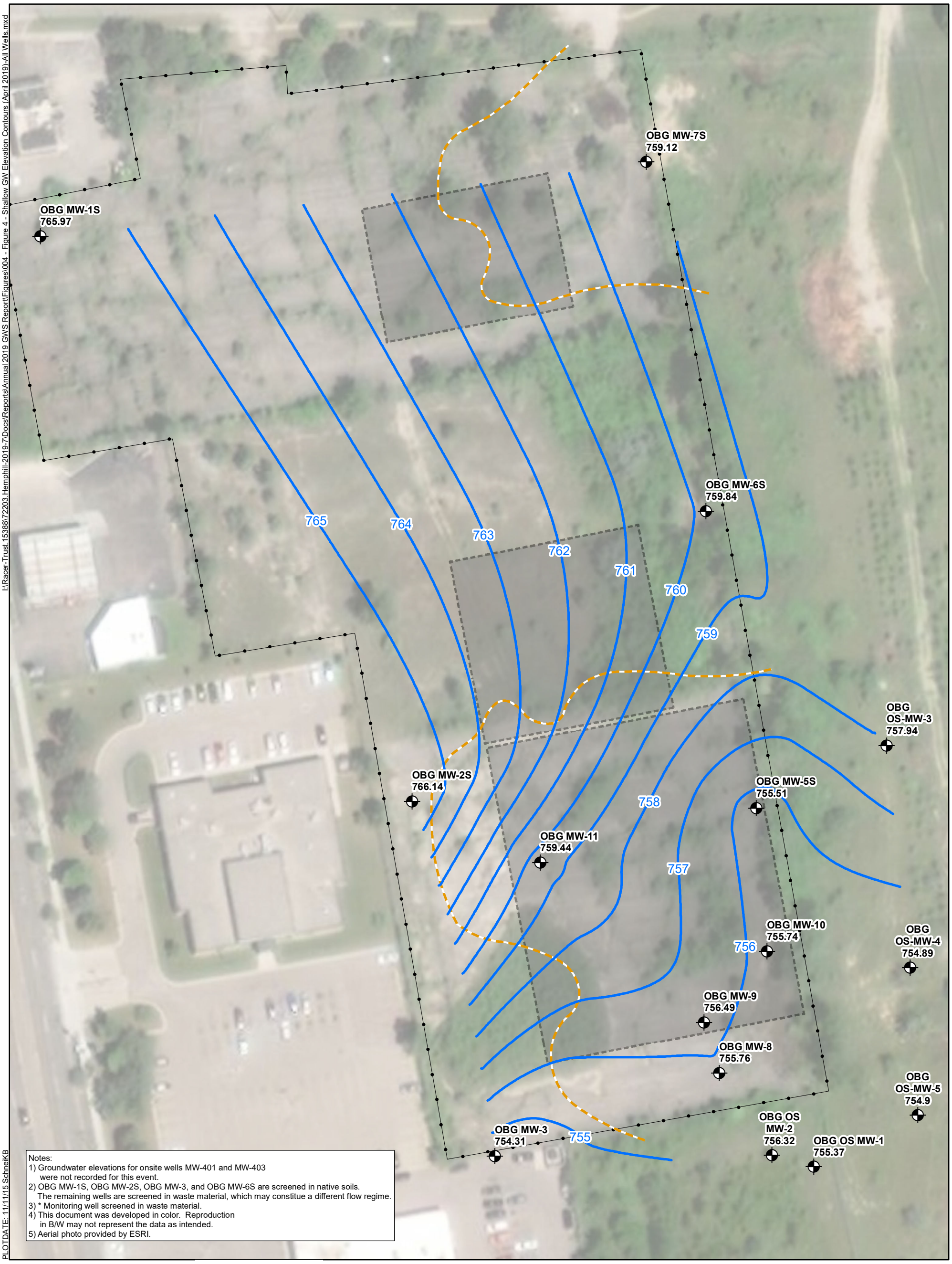
N

O'BRIEN & GERE

APRIL 2019

I:\Racer-Trust.15388\72203.Hemphill-2019-7\Docs\Reports\Annual 2019 GWS Report\Figures\001 - Figure 1 - Well Locations.mxd
PLOTDATE: 11/29/17 SchnaiKB

FIGURE 2



I:\Racer-Trust.15388\72203.Hemphill-2019-7\Docs\Reports\Annual 2019 GWS Report\Figures\004 - Figure 4 - Shallow GW Elevation Contours (April 2019)-All Wells.mxd

PLOTDATE: 11/11/15 SchnelKB

LEGEND

- SHALLOW MONITORING WELL LOCATION
- SHALLOW GROUNDWATER ELEVATION CONTOUR
- FENCE LINE
- FORMER BUILDING
- APPROXIMATE EXTENT OF WASTE FILL ONSITE

RACER TRUST
HEMPHILL ROAD INDUSTRIAL LAND
BURTON, MICHIGAN

INTERPRETED SHALLOW GROUNDWATER ELEVATION CONTOURS APRIL 29, 2019

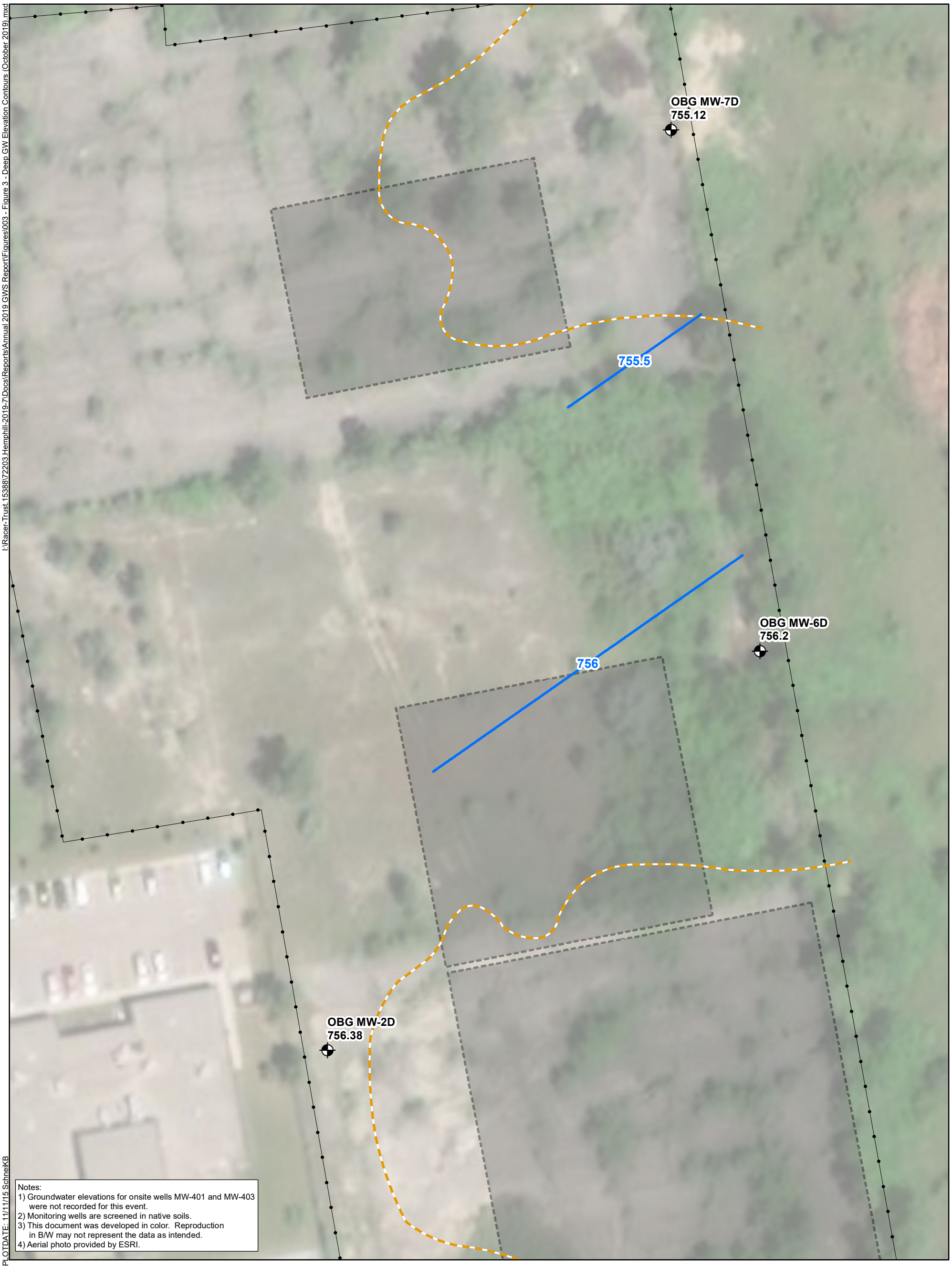
0 25 50 75 100
Feet

N

O'BRIEN & GERE

MAY 2019
72203

FIGURE 3



I:\Racer-Trust.15388\72203.Hemphill-2019-7\Docs\Reports\Annual 2019 GWS Report\Figures\003 - Figure 3 - Deep GW Elevation Contours (October 2019).mxd

PLOTDATE: 11/11/15 SchneiKB

LEGEND

- DEEP MONITORING WELL LOCATION
- DEEP GROUNDWATER ELEVATION CONTOUR
- FENCE LINE
- FORMER BUILDING
- APPROXIMATE EXTENT OF WASTE FILL ONSITE

RACER TRUST
HEMPHILL ROAD INDUSTRIAL LAND
BURTON, MICHIGAN

DEEP GROUNDWATER ELEVATION CONTOURS
APRIL 29, 2019

0 25 50 75 100
Feet

N

O'BRIEN & GERE

MAP 2019
72203

FIGURE 4

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OBG MW-7D
Arsenic - 30 µg/L (Total) 31 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-7S
Arsenic - 11 µg/L (Total) 8 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-1S
As, Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-6S
Arsenic - 11 µg/L (Total) 13 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-6D
Arsenic - 21 µg/L (Total) 22 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG OS-MW-3
Arsenic - 18 µg/L (Total) 17 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-2S
Arsenic - 14 µg/L (Total) 14 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-5S
Lead - 4 µg/L (Total) 4 µg/L (Dissolved)
As, Ba, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-2D
Arsenic - 28 µg/L (Total) 26 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-403
Not Sampled[5]

OBG MW-11
Not Sampled[4]

OBG OS-MW-4
As, Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect or below criteria

OBG MW-10
Not Sampled[4]

OBG MW-9
Not Sampled[4]

OBG MW-4S
Not Sampled[4]

OBG MW-401
Not Sampled[5]

OBG OS-MW-2
Arsenic - 50 µg/L (Total) 41 µg/L (Dissolved)
Lead - 4 µg/L (Total) non-detect (Dissolved)
Ba, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG MW-8
Not Sampled[4]

OBG MW-3
As, Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG OS-MW-1
Arsenic - 31 µg/L (Total) 28 µg/L (Dissolved)
Ba, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

OBG OS-MW-5
Barium - 2,370 µg/L (Total) 2,250 µg/L (Dissolved)
As, Pb, Se, Zn - non-detect or below criteria
VOCs - non-detect

NOTES:
1) The EGLE Part 201 drinking water criteria for arsenic is 10 µg/L.
2) The EGLE Part 201 drinking water criteria for barium is 2,000 µg/L.
3) The EGLE Part 201 drinking water criteria for lead is 4 µg/L.
4) Monitoring well MW-4S and OBG MW-10 were not sampled due to the presence of LNAPL.
5) Monitoring wells MW-401 and MW-403 were not sampled based on screen lengths greater than 10 feet.
6) This document was developed in color. Reproduction in B/W may not represent the data as intended.
7) Background image provided by ESRI.

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LEGEND

- MONITORING WELL (SCREENED IN NATIVE SOIL)
- MONITORING WELL (SCREENED IN FILL)
- FENCE LINE
- HEMPHILL ROAD INDUSTRIAL LAND
- FORMER BUILDING
- APPROXIMATE EXTENT OF WASTE FILL ONSITE

RACER TRUST
HEMPHILL ROAD INDUSTRIAL LAND
BURTON, MICHIGAN

GROUNDWATER ANALYTICAL RESULTS
APRIL 2019

0 25 50 75 100
Feet

N

O'BRIEN & GERE

MAY 2019
72203

Exhibit A

Groundwater Sampling Logs – April 2019

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/29/19
Site Name: hemphill Rd
Location: Flint
Project No.: 72203
Personnel: KBS

Weather: cloudy 50's
Well #: OBG-MW-15
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *: 27.20 ft.
Depth to Water *: 11.67 ft.
Length of Water Column: ft.
Volume of Water in Well: gal.(s)
3X Volume of Water in Well: gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 4.5 L / 1.1 gal gal.(s)
Did well go dry? No

* Measurements taken from: X Well Casing; Protective Casing; (Other, Specify)

Instrument Calibration:

Calibrated within range

pH	yes
ORP	yes
Conductivity	yes
DO	yes

Water parameters:

Pumping Rate 100 ml/min

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	12.31	9.14	1.081	15.55	7.31	230.1	22
5 min	12.80	9.13	1.123	13.78	7.57	231.8	18
10 min	13.09	9.20	1.098		7.59	233.1	25
15 min	13.48	9.25	1.099		7.60	233.4	25
20 min	13.74	9.28	1.099		7.60	219.7	20
25 min	13.86	9.32	1.099		7.59	214.2	20
30 min	14.02	9.32	1.099		7.59	209.1	22
35 min							
40 min							
45 min							
50 min							
55 min							
60 min							

ter Sample:

e Collected: 1008

sical Appearance at Start: Clear
lity (> 100 NTU): NONE
/Free Product: 22 NONE

Physical Appearance at Sampling:
Color: Clear
Odor: NONE
Turbidity (> 100 NTU): 22
Sheen/Free Product: NONE

es collected:

S	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40 ml VOA	HCl	
Total metals	1	125 ml	HNO_3	
Dissolved Metals	1	125 ml	HNO_3	yes

Had to recalibrate DO — Reading High

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/30/19
Site Name: Hemphill Rd
Location: Burton, MI
Project No.: 72203
Personnel: KBS

Weather: Cloudy 40°F
Well #: OBG-MW-2S
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *: 20.30 ft.
Depth to Water *: 9.19 ft.
Length of Water Column: ft.
Volume of Water in Well: gal.(s)
3X Volume of Water in Well: gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 3 gal.(s)
Did well go dry? NO

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

Calibrated within range
pH yes
ORP yes
Conductivity yes
DO yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	10.09	8.32	2.168	4.84	7.33	238.8	22
900 5 min	11.45	8.43	2.172	2.50	7.35	194.7	23
905 10 min	11.85	8.40	2.187	1.95	7.37	69.3	18
910 15 min	12.19	8.43	2.191	1.82	7.37	55.5	18
915 20 min	12.25	8.41	2.196	2.10	7.38	29.4	15
920 25 min	12.66	8.42	2.196	1.53	7.38	-7.7	14
925 30 min	13.06	8.55	2.199	1.26	7.38	-17.1	10
930 35 min	13.41	8.62	2.198	1.15	7.38	-27.4	8
935 40 min	13.69	8.59	2.195	1.01	7.38	-39.4	17
940 45 min	14.02	8.65	2.193	0.93	7.38	-42.8	16
945 50 min	14.25	8.72	2.190	0.88	7.38	-49.3	16
950 55 min	14.44	8.72	2.188	0.94	7.37	-51.9	17
60 min							

Water Sample:
Time Collected: 953

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Slightly cloudy	Color	clear
Odor	None	Odor	NONE
Turbidity (> 100 NTU)	22	Turbidity (> 100 NTU)	17
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml VOA	HCl	
Total Metals	1	125 ml	HNO3	
Dissolved Metals	1	125 ml	HNO3	Yes

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/30/19
Site Name: Hemphill Rd
Location: Burton, MI
Project No.: 72203
Personnel: KBS

Weather: Cloudy 50's
Well #: OBG-MW-20D
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *: 38.40 ft.
Depth to Water *: 18.87 ft.
Length of Water Column: ____ ft.
Volume of Water in Well: ____ gal.(s)
3X Volume of Water in Well: ____ gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify) ____

Instrument Calibration:

Calibrated within range

pH: Yes
ORP: Yes
Conductivity: Yes
DO: Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
1010 initial	19.20	initial 10.40	initial 1.412	initial 3.98	initial 7.56	initial 21.9	initial 21
1015 5 min	19.49	10.45	1.394	2.36	7.50	22.2	19
1020 10 min	19.69	10.65	1.372	1.73	7.51	18.3	15
1025 15 min	19.74	10.86	1.359	1.33	7.50	4.3	18
1030 20 min	19.79	10.86	1.359	0.95	7.56	-10.6	14
1035 25 min	19.89	10.94	1.358	0.69	7.51	-20.1	7
1040 30 min	19.95	10.95	1.357	0.64	7.51	-51.1	8
1045 35 min	19.95	11.04	1.355	0.67	7.51	-58.9	8
1050 40 min	19.95	11.00	1.355	0.69	7.51	-54.9	7
45 min							
50 min							
55 min							
60 min							

Water Sample:

Time Collected: 1053

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Slightly cloudy	Color	Clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	21	Turbidity (> 100 NTU)	7
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40 ml VOA	HCl	
Total Metals	1	125 ml Poly	HNO_3	Yes
Dissolved Metals	1	125 ml Poly	HNO_3	

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/30/19
Site Name: Hemphill Rd
Location: Burton, MI
Project No.: 72203
Personnel: KBS

Weather: cloudy 50's
Well #: OBG-MW-35
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well * 27.00 ft.
Depth to Water * 23.00 ft.
Length of Water Column ____ ft.
Volume of Water in Well ____ gal.(s)
3X Volume of Water in Well ____ gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
____ 4" Diameter Well = 0.653 X LWC
____ 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 1/2 gal.(s)
Did well go dry? No

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

Calibrated within range

pH yes
ORP yes
Conductivity yes
DO yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
1110 initial	23.00	9.52	5.360	1.57	7.09	11.2	26
1115 5 min		9.50	5.407	1.43	7.12	7.8	24
1120 10 min		9.52	5.098	0.85	7.11	8.7	21
1125 15 min		9.52	4.913	0.54	7.10	9.0	12
1130 20 min		9.57	4.824	0.48	7.10	8.3	14
1135 25 min		9.42	4.792	0.46	7.16	8.3	16
1140 30 min		9.48	4.763	0.39	7.10	7.2	12
35 min		9.37	4.742	0.38	7.10	7.8	9
40 min							
45 min							
50 min							
55 min							
60 min							

Water Sample:

Time Collected: 1148

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Clear	Color	Clear
Odor	None	Odor	None
Turbidity (> 100 NTU)	26	Turbidity (> 100 NTU)	9
Sheen/Free Product	None	Sheen/Free Product	None

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40 ml VOA	HCL	NO
Total metals	1	125 ml	HNO_3	NO
Dissolved metals	1	125 ml	HNO_3	YES

Notes:

MS/MSD collected

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/30/19
Site Name: Hemphill
Location: Burton MI
Project No.: 72203
Personnel: KBS

Weather: cloudy 50's
Well #: OBG-MW-5S
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *: 20.29 ft.
Depth to Water *: 15.49 ft.
Length of Water Column: ft.
Volume of Water in Well: gal.(s)
3X Volume of Water in Well: gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 1/2 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

Calibrated within range
pH: yes
ORP: yes
Conductivity: yes
DO: yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
1230 initial	16.14	9.66	2.436	3.24	6.83	-69.0	45
1235 5 min	16.61	9.53	2.346	1.20	6.80	-77.1	52
1240 10 min	17.13	9.49	2.236	1.56	6.75	-76.4	50
1245 15 min	17.31	9.55	2.218	0.56	6.74	-75.6	54
1250 20 min	17.51	9.64	2.215	0.52	6.74	-77.0	56
1255 25 min	17.69	9.85	2.253	0.47	6.74	-84.0	44
1300 30 min	17.75	9.88	2.369	0.45	6.75	-85.4	44
1305 35 min	17.81	9.90	2.455	0.35	6.75	-84.8	45
1310 40 min	17.86	10.07	2.582	0.40	6.75	-84.2	34
1315 45 min	17.95	10.05	2.613	0.38	6.75	-82.8	27
1320 50 min	18.05	10.08	2.630	0.37	6.75	-79.7	24
1325 55 min	18.10	10.13	2.636	0.35	6.75	-73.6	25
60 min							

Water Sample:*
Time Collected: ~~1322~~ 1330

Physical Appearance at Start		Physical Appearance at Sampling	
Color	yellowish	Color	Slightly cloudy
Odor	yes	Odor	yes
Turbidity (> 100 NTU)	45	Turbidity (> 100 NTU)	25
Sheen/Free Product	yes	Sheen/Free Product	yes free product

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml VOA	HCL	NO
Total Metals	1	125 ml	HNO_3	NO
Dissolved Metals	1	125 ml	HNO_3	yes

Notes: NAPL seen on water level probe and during metals sampling
* DUP-1 collected

O'Brien & Gere Engineers, Inc. — **Standard Groundwater Sampling Log**

Date: 4/29/19
Site Name: Hempmill
Location: Burton
Project No.: 72203
Personnel: KBS

Weather: Rain 50's
Well #: OBG-MW-05
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *	19.15	ft.
Depth to Water *	12.86	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1½ gal.(s)
Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within range
pH	Yes
ORP	Yes
Conductivity	Yes
DO	Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	13.62	7.29	1.218	8.42	7.39	56.4	29
1345 5 min	14.29	6.85	1.257	6.70	7.37	57.7	28
1350 10 min	14.50	6.66	1.263	6.45	7.36	58.7	28
1355 15 min		6.61	1.262	5.82	7.34	59.6	23
1400 20 min	15.09	6.55	1.265	5.89	7.33	56.5	23
1405 25 min	15.49	6.67	1.263	5.56	7.30	49.0	25
1410 30 min	15.94	6.67	1.265	5.19	7.28	41.7	32
1415 35 min	16.31	6.59	1.266	5.11	7.26	39.8	34
40 min							
45 min							
50 min							
55 min							
60 min							

Water Sample:
Time Collected: 1418

Physical Appearance at Start		Physical Appearance at Sampling	
Color	clear	Color	clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	29	Turbidity (> 100 NTU)	34
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40 ml VOA	HCl	
Total metal	1	125 ml	HNO_3	
Dissolved metals	1	125 ml	HNO_3	yes

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/29/19
Site Name: Hempnill
Location: Burton
Project No.: 72203
Personnel: KBS

Weather: Rain 50's
Well #: OBG-MW-60D
Evacuation Method: Peristaltic
Sampling Method: ~~Bladder~~ Low Flow

Well Information:

Depth of Well *	44.41	ft.
Depth to Water *	14.49	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 2 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

Calibrated within range

pH	Yes
ORP	Yes
Conductivity	Yes
DO	Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
1450 initial	17.26	7.66	0.864	13.60	7.89	-2.6	37
1455 5 min	17.76	7.49	0.867	11.[illegible]	7.88	2.3	32
1500 10 min	18.35	7.86	0.846	11.63	7.89	9.3	45
1505 15 min	18.03	8.33	0.844	9.55	7.89	10.9	41
1510 20 min	19.29	8.42	0.847	8.11	7.88	3.8	45
1515 25 min	19.65	8.55	0.850	6.90	7.88	-13.0	47
1520 30 min	19.74	8.44	0.855	5.57	7.88	-18.2	47
1525 35 min	19.80	8.50	0.856	4.50	7.87	-32.9	49
1530 40 min	19.87	8.49	0.857	4.43	7.87	-43.0	49
1535 45 min	19.98	8.48	0.859	3.66	7.88	-54.5	47
1540 50 min	20.11	8.40	0.862	3.25	7.88	-62.4	42
1545 55 min	20.22	8.53	0.861	3.12	7.88	-68.7	42
1550 60 min	20.34	8.56	0.862	3.11	7.89	-71.0	40
	20.45	8.53	0.864	3.12	7.89	-69.5	

Water Sample:
Time Collected: 1553

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Clear	Color	Clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	37	Turbidity (> 100 NTU)	
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml VOA	HCl	
Total Metals	1	125ml	HNO_3	
Dissolved Metals	1	125ml	HNO_3	Yes

Notes:

O'Brien & Gere Engineers, Inc. — **Standard Groundwater Sampling Log**

Date: 4/29/19
Site Name: Hemphill Rd
Location: Hemphill
Project No.: 72203
Personnel: KBS

Weather: Cloudy / Freezing Rain 30's
Well #: OBG-MW-7S
Evacuation Method: peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *	17.71	ft.
Depth to Water *	7.18	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 8 liter / 1.3 gal (gal.(s))
Did well go dry? No

* Measurements taken from: X Well Casing; Protective Casing; (Other, Specify)

Instrument Calibration:

	Calibrated within range
pH	yes
ORP	yes
Conductivity	yes
DO	yes

Water parameters: Pumping Rate 100ml/min

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	8.08	8.25	1.097	8.30	7.13	+102.5	259
1040 5 min	8.51	8.23	1.089	3.70	7.08	-92.8	280
1045 10 min	9.01	8.24	1.081	2.00	7.05	-87.8	230
1050 15 min	9.65	8.30	1.077	1.35	7.03	-84.9	184
1055 20 min	10.22	8.42	1.074	1.00	7.02	-78.7	177
1100 25 min	10.71	8.40	1.074	0.89	7.01	-77.2	161
1105 30 min	11.00	8.38	1.071	0.75	7.00	-75.1	147
1110 35 min	11.59	8.44	1.068	0.69	7.00	-73.0	129
1115 40 min	11.85	8.32	1.070	0.66	6.98	-68.3	118
1120 45 min	12.13	8.17	1.068	0.67	6.97	-69.0	103
1125 50 min							
55 min							
60 min							

Water Sample:
Time Collected: 1130

Physical Appearance at Start		Physical Appearance at Sampling	
Color	light Brown / iron bacteria	Color	Slightly cloudy
Odor	MINE	Odor	NONE
Turbidity (> 100 NTU)	259	Turbidity (> 100 NTU)	103
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml vom	HCL	
TOTAL metals	1	125B poly	HNO_3	
Dissolved metals	1	125B poly	HNO_3	yes

Notes:

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 4/29/19
Site Name: Henphill Rd
Location: Burton, MI
Project No.: 72203
Personnel: KBS

Weather: cloudy / freezing Rain
Well #: OBG-MW-7D
Evacuation Method: Bladder Pump
Sampling Method: Low Flow

Well Information:

Depth of Well *	47.67	ft.
Depth to Water *	11.24	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 4 gal.(s)
Did well go dry? No

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within range

pH	Yes
ORP	Yes
Conductivity	Yes
DO	Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	11.28	9.30	0.525	60.27	8.04	-0.1	224
5 min		9.01	0.530	2.17	7.95	-39.3	761
10 min		8.12	0.529	1.42	7.91	-59.0	747
15 min		8.23	0.528	1.14	7.93	-64.6	709
20 min		7.37	0.527	0.87	7.92	-68.1	554
25 min		9.56	0.529	0.75	7.93	-84.6	448
30 min		9.50	0.529	0.65	7.94	-80.5	240
35 min		9.49	0.529	0.62	7.94	-81.7	198
40 min		9.53	0.529	0.60	7.94	-88.4	136
45 min		9.55	0.529	0.56	7.95	-95.9	104
50 min		9.52	0.529	0.54	7.95	-100.1	91
55 min		9.56	0.529	0.53	7.95	-94.9	78
60 min		9.51	0.528	0.52	7.95	-91.8	70
		9.600	0.529	0.46	7.96	-100.7	49

Water Sample:
Time Collected: 1313

OVER ⇒

Physical Appearance at Start		Physical Appearance at Sampling	
Color	light Gray	Color	slightly cloudy
Odor	None	Odor	None
Turbidity (> 100 NTU)	224	Turbidity (> 100 NTU)	50
Sheen/Free Product	None	Sheen/Free Product	None

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml vial	HCl	
Total Metals	1	125 ml	HNO_3	
Dissolved Metals	1	125 ml	HNO_3	Yes

OBG-MW-7D

	DD	Temp	Con	DO	pH	ORP	Turb
1305	11.28	9.53	0.529	0.48	7.96	-99.1	51
1310		9.47	0.530	0.49	7.96	-101.3	50

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date	5/2/19
Site Name	Hemphill
Location	Burton, MI
Project No.	72203
Personnel	KBS
Weather	Cloudy 50s
Well #	OBG-05-MW-1
Evacuation Method	Peristaltic
Sampling Method	Low Flow

Well Information:

Depth of Well *	30.17	ft.
Depth to Water *	21.20	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:

- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling ______ gal.(s)

Did well go dry? No

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

Calibrated within range

pH	yes
ORP	yes
Conductivity	yes
DO	yes

Water parameters:

Time		Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
	initial	21.52	9.20	0.639	10.45	6.88	-23.9	
1000	5 min	21.79	9.22	1.09	8.03	6.97	-68.3	246
1005	10 min	22.21	9.27	1.054	3.38	7.05	-94.5	133
1010	15 min	22.35	9.45	1.018	2.56	7.05	-102.8	62
1015	20 min	22.61	9.40	0.982	1.67	7.04	-101.8	34
1020	25 min	22.69	9.39	0.966	1.63	7.04	-98.4	28
1025	30 min	22.79	9.39	0.934	1.24	7.04	-96.2	23
1030	35 min	22.92	9.49	0.909	1.16	7.04	-90.6	26
1035	40 min	23.05	9.42	0.889	1.11	7.03	-86.7	23
1040	45 min	23.13	9.54	0.882	1.07	7.03	-86.8	23
	50 min							
	55 min							
	60 min							

Water Sample:

Time Collected 1048

Physical Appearance at Start		Physical Appearance at Sampling	
Color	light Brown	Color	clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	246	Turbidity (> 100 NTU)	23
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml VOA	HCL	
Total Metals	1	125 ml	HNO3	
Dissolved Metals	1	125 ml	HNO3	yes

O'Brien & Gere Engineers, Inc. — **Standard Groundwater Sampling Log**

Date: 5/2/19
Site Name: Hemphill
Location: Burton, MI
Project No.: 72203
Personnel: KBS

Weather: cloudy 50s
Well #: OBG-05-MW-2
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *: 30.16 ft.
Depth to Water *: 20.35 ft.
Length of Water Column: ft.
Volume of Water in Well: gal.(s)
3X Volume of Water in Well: gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration: Calibrated within range

pH	Yes
ORP	Yes
Conductivity	Yes
DO	Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
1100 initial	20.91	9.40	0.834	7.36	7.09	-20.5	56
1105 5 min	20.29	9.37	0.794	1.95	7.01	-43.0	69
1110 10 min	21.36	9.20	0.788	1.67	7.00	-37.6	47
1115 15 min	21.55	9.16	0.783	1.42	6.99	-43.4	43
1120 20 min	21.61	9.64	0.782	1.23	6.98	-43.9	40
1125 25 min	21.73	9.15	0.777	1.17	6.97	-47.4	38
1130 30 min	21.91	9.06	0.771	1.18	6.97	-50.3	35
35 min							
40 min							
45 min							
50 min							
55 min							
60 min							

Water Sample:
Time Collected: 1130

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Slightly cloudy	Color	Clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	56	Turbidity (> 100 NTU)	35
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOCs	3	40 ml vom	HCL	
Total metals	1	125 ml	HNO3	
Dissolved metals	1	125 ml	HNO3	Yes

Notes:

O'Brien & Gere Engineers, Inc. — **Standard Groundwater Sampling Log**

Date	5/1/19	Weather	cloudy 50s
Site Name	Humphrill	Well #	OBG-MW-05-3
Location	Burton	Evacuation Method	Peristaltic
Project No.	72203	Sampling Method	Low Flow
Personnel	KBS		

Well Information:

Depth of Well *	30.28	ft.
Depth to Water *	24.95	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 1/2 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

	Calibrated within range
pH	Yes
ORP	Yes
Conductivity	Yes
DO	Yes

Water parameters:

		Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
945	initial	25.01	9.35	1.137	7.55	7.42	21.7	13
950	5 min	25.05	9.17	1.070	1.77	7.53	-99.5	14
955	10 min	25.09	9.08	1.055	1.20	7.56	-128.9	9
1000	15 min	25.11	9.01	1.041	1.01	7.57	-117.0	18
1005	20 min	25.11	9.00	1.035	0.93	7.58	-134.7	24
1010	25 min	25.11	9.06	1.026	1.26	7.59	-137.6	23
1015	30 min	25.11	9.06	1.016	0.77	7.59	-127.9	22
1020	35 min	25.11	9.13	1.005	0.74	7.60	-147.6	19
1025	40 min	25.11	9.14	1.003	0.65	7.60	-145.6	17
1030	45 min	25.11	9.17	0.999	0.58	7.61	-149.2	15
	50 min	25.11	9.23	0.989	0.62	7.61	-143.8	19
	55 min							
	60 min							

Water Sample:
Time Collected: 1038

Physical Appearance at Start		Physical Appearance at Sampling	
Color	clear	Color	clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	13	Turbidity (> 100 NTU)	19
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40 ml VOA	HCL	
Total Metal	1	125 ml	HNO3	
Dissolved Metal	1	125 ml	HNO3	Yes

Notes:

O'Brien & Gere Engineers, Inc. **Standard Groundwater Sampling Log**

Date 5/1/19
Site Name Hempwill
Location Burton, MI
Project No. 72203
Personnel KBS

Weather cloudy 50s
Well # OBG-OS-MW-4
Evacuation Method Peristaltic
Sampling Method Low Flow

Well Information:

Depth of Well * ft.
Depth to Water * 24.10 ft.
Length of Water Column ft.
Volume of Water in Well gal.(s)
3X Volume of Water in Well gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 1 1/2 gal.(s)
Did well go dry? NO

* Measurements taken from X Well Casing Protective Casing (Other, Specify)

Instrument Calibration: Calibrated within range

pH	Yes
ORP	Yes
Conductivity	Yes
DO	Yes

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	24.10	10.23	1.668	10.22	7.00	-88.8	41
1110 5 min	24.10	10.24	1.649	5.06	7.00	-95.2	41
1115 10 min	24.10	10.27	1.610	2.18	6.96	-82.4	39
1120 15 min	24.10	10.28	1.669	1.76	6.96	-84.5	36
20 min							
25 min	24.10	11.01	1.551	6.04	6.87	-109.0	37
30 min	24.10	10.53	1.493	1.67	6.88	-100.5	27
35 min	24.10	10.85	1.490	1.33	6.87	-85.0	21
40 min	24.10	10.94	1.493	1.15	6.87	-86.5	26
45 min	24.10	10.93	1.492	0.90	6.87	-90.7	25
50 min	24.10	10.84	1.485	0.95	6.88	-96.4	27
55 min	24.10	10.82	1.480	0.93	6.87	-95.4	27
60 min							

Water Sample:
Time Collected 1240

Physical Appearance at Start		Physical Appearance at Sampling	
Color	clear	Color	Clear
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	41	Turbidity (> 100 NTU)	27
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40 ml VOA	HCl	
Total Metals	1	125 ml	HNO_3	
Dissolved Metals	1	125 ml	HNO_3	Yes

Notes: Battery died restarted sampling @ 1203

O'Brien & Gere Engineers, Inc.

Standard Groundwater Sampling Log

Date: 5/1/19
Site Name: Humphrey
Location: Burton, MI
Project No.: 72203
Personnel: KDS

Weather: cloudy 50's
Well #: OBG-05-MW5
Evacuation Method: Peristaltic
Sampling Method: Low Flow

Well Information:

Depth of Well *	28.13	ft.
Depth to Water *	24.47	ft.
Length of Water Column		ft.
Volume of Water in Well		gal.(s)
3X Volume of Water in Well		gal.(s)

Water Volume /ft. for:
- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 1 gal.(s)
Did well go dry? NO

* Measurements taken from: [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

Calibrated within range

pH	YES
ORP	YES
Conductivity	YES
DO	YES

Water parameters:

	Drawdown measured	Temperature Celsius	Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Turbidity NTUs
initial	24.61	12.90	1.853	8.05	6.74	-67.3	42
1310 5 min	24.69	12.74	1.838	2.03	6.70	-72.9	39
1315 10 min	24.61	12.76	1.832	1.83	6.70	-78.9	37
1320 15 min	24.61	12.90	1.817	1.22	6.67	-73.7	35
1325 20 min	24.61	12.79	1.804	1.07	6.66	-76.3	33
1330 25 min	24.61	12.77	1.786	1.03	6.64	-75.5	33
1335 30 min	24.61	12.78	1.771	1.02	6.64	-75.8	30
35 min							
40 min							
45 min							
50 min							
55 min							
60 min							

Water Sample:
Time Collected: 1340

Physical Appearance at Start		Physical Appearance at Sampling	
Color	clear / black specks	Color	clear
Odor	chemical odor	Odor	chemical odor
Turbidity (> 100 NTU)	42	Turbidity (> 100 NTU)	30
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Analyses	# Bottles	Bottle size/type	Preservative	Field Filtered
VOC	3	40ml VOA	HCL	
Total Metals	1	125ml	HNO3	
Dissolved Metals	1	125ml	HNO3	YES

Notes:

Exhibit B

Groundwater Analytical Data – April 2019

Analytical Laboratory Report

Report ID: S01402.01(01)
Generated on 05/03/2019

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S01402.01-S01402.12
Project: RACER Hemphill Rd
Collected Date: 04/29/2019 - 04/30/2019
Submitted Date/Time: 04/30/2019 13:45
Sampled by: Kevin Schneider
P.O. #: PO

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.
Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

There is no additional narrative for this analytical report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003

Sample Summary (12 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S01402.01	OBG-MW-1S	Groundwater	04/29/19 10:08
S01402.02	OBG-MW-7S	Groundwater	04/29/19 11:30
S01402.03	OBG-MW-7D	Groundwater	04/29/19 13:13
S01402.04	OBG-MW-6S	Groundwater	04/29/19 14:18
S01402.05	OBG-MW-6D	Groundwater	04/29/19 15:53
S01402.06	OBG-MW-6D Collocated	Groundwater	04/29/19 15:53
S01402.07	OBG-MW-2S	Groundwater	04/30/19 09:53
S01402.08	OBG-MW-2D	Groundwater	04/30/19 10:53
S01402.09	OBG-MW-3S	Groundwater	04/30/19 11:48
S01402.10	OBG-MW-3S MS	Groundwater	04/30/19 11:48
S01402.11	OBG-MW-3S MSD	Groundwater	04/30/19 11:48
S01402.12	Trip Blank-043019	Water	04/30/19 00:01

Lab Sample ID: S01402.01
Sample Tag: OBG-MW-1S
Collected Date/Time: 04/29/2019 10:08
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	Not detected	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.152	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 13:53, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	0.002		mg/L	5	7440-38-2	
Barium	0.156	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 16:13, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.01 (continued)
Sample Tag: OBG-MW-1S

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 16:13, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.02
Sample Tag: OBG-MW-7S
Collected Date/Time: 04/29/2019 11:30
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:36, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.008	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.165	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	0.008	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 13:54, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.011	0.002		mg/L	5	7440-38-2	
Barium	0.188	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 16:33, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.02 (continued)
Sample Tag: OBG-MW-7S

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 16:33, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.03
Sample Tag: OBG-MW-7D
Collected Date/Time: 04/29/2019 13:13
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:37, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.031	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.091	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 13:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.030	0.002		mg/L	5	7440-38-2	
Barium	0.091	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	0.035	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 16:53, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.03 (continued)
Sample Tag: OBG-MW-7D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 16:53, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.04
Sample Tag: OBG-MW-6S
Collected Date/Time: 04/29/2019 14:18
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:38, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.013	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.158	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 13:57, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.011	0.002		mg/L	5	7440-38-2	
Barium	0.147	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:13, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.04 (continued)
Sample Tag: OBG-MW-6S

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:13, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.05
Sample Tag: OBG-MW-6D
Collected Date/Time: 04/29/2019 15:53
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:39, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.022	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.073	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	0.061	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 13:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.021	0.002		mg/L	5	7440-38-2	
Barium	0.073	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:33, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.05 (continued)
Sample Tag: OBG-MW-6D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:33, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.06
Sample Tag: OBG-MW-6D Collocated
Collected Date/Time: 04/29/2019 15:53
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:41, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.022	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.071	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 13:59, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.021	0.002		mg/L	5	7440-38-2	
Barium	0.072	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:53, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.06 (continued)
Sample Tag: OBG-MW-6D Collocated

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:53, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.07
Sample Tag: OBG-MW-2S
Collected Date/Time: 04/30/2019 09:53
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:42, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.014	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.167	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 14:01, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.014	0.002		mg/L	5	7440-38-2	
Barium	0.168	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:12, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.07 (continued)
Sample Tag: OBG-MW-2S

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:12, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.08
Sample Tag: OBG-MW-2D
Collected Date/Time: 04/30/2019 10:53
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.026	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.233	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 14:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.028	0.002		mg/L	5	7440-38-2	
Barium	0.235	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	0.034	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:32, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.08 (continued)
Sample Tag: OBG-MW-2D

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:32, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.09
Sample Tag: OBG-MW-3S
Collected Date/Time: 04/30/2019 11:48
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
3	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:44, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.002	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.242	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 14:04, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.003	0.002		mg/L	5	7440-38-2	
Barium	0.246	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 14:17, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01402.09 (continued)
Sample Tag: OBG-MW-3S

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 14:17, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01402.10
Sample Tag: OBG-MW-3S MS
Collected Date/Time: 04/30/2019 11:48
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
4	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:46, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.239	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.504	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	0.223	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	0.237	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	0.212	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 14:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.237	0.002		mg/L	5	7440-38-2	
Barium	0.513	0.005		mg/L	5	7440-39-3	
Lead	0.221	0.003		mg/L	5	7439-92-1	
Selenium	0.225	0.005		mg/L	5	7782-49-2	
Zinc	0.211	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:46, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	45	10		ug/L	1	60-29-7	1
Acetone	Not detected	50		ug/L	1	67-64-1	1
Methyl iodide	47	1		ug/L	1	74-88-4	1
Carbon disulfide	44	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	47	5		ug/L	1	1634-04-4	1
Acrylonitrile	47	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	42	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	41	5		ug/L	1	75-71-8	1
Chloromethane	44	5		ug/L	1	74-87-3	1
Vinyl chloride	45	1		ug/L	1	75-01-4	1
Bromomethane	45	5		ug/L	1	74-83-9	1
Chloroethane	46	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	48	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	47	1		ug/L	1	75-35-4	1
Methylene chloride	47	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	48	1		ug/L	1	156-60-5	1

1-spiked at 50ug/L

Lab Sample ID: S01402.10 (continued)
Sample Tag: OBG-MW-3S MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:46, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1-Dichloroethane	48	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	48	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	45	1		ug/L	1	67-66-3	1
Bromochloromethane	47	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	50	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	1
2-Hexanone	Not detected	50		ug/L	1	591-78-6	1
Carbon tetrachloride	53	1		ug/L	1	56-23-5	1
Benzene	51	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	51	1		ug/L	1	107-06-2	1
Trichloroethene	51	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	52	1		ug/L	1	78-87-5	1
Bromodichloromethane	52	1		ug/L	1	75-27-4	1
Dibromomethane	51	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	52	1		ug/L	1	10061-01-5	1
Toluene	53	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	52	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	51	1		ug/L	1	79-00-5	1
Tetrachloroethene	51	1		ug/L	1	127-18-4	1
trans-1,4-Dichloro-2-butene	46	1		ug/L	1	110-57-6	1
Dibromochloromethane	51	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	50	1		ug/L	1	106-93-4	1
Chlorobenzene	51	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	52	1		ug/L	1	630-20-6	1
Ethylbenzene	52	1		ug/L	1	100-41-4	1
p,m-Xylene*	103	2		ug/L	1		1
o-Xylene	51	1		ug/L	1	95-47-6	1
Styrene	51	1		ug/L	1	100-42-5	1
Isopropylbenzene	52	5		ug/L	1	98-82-8	1
Bromoform	50	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	49	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	49	1		ug/L	1	96-18-4	1
n-Propylbenzene	52	1		ug/L	1	103-65-1	1
Bromobenzene	50	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	52	1		ug/L	1	108-67-8	1
tert-Butylbenzene	54	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	52	1		ug/L	1	95-63-6	1
sec-Butylbenzene	50	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	50	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	49	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	49	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	49	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	48	1		ug/L	1	526-73-8	1
n-Butylbenzene	50	1		ug/L	1	104-51-8	1
Hexachloroethane	48	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	48	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	49	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	48	5		ug/L	1	87-61-6	1

1-spiked at 50ug/L

Lab Sample ID: S01402.10 (continued)
Sample Tag: OBG-MW-3S MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 17:46, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Naphthalene	48	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	46	5		ug/L	1	91-57-6	1

1-spiked at 50ug/L

Lab Sample ID: S01402.11
Sample Tag: OBG-MW-3S MSD
Collected Date/Time: 04/30/2019 11:48
Matrix: Groundwater
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	3.8	IR
4	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	
Metal Digestion	Completed	SW3015A	05/01/19 12:15	JRH	

Metals

Method: E200.8, Run Date: 05/01/19 13:47, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.240	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.498	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	0.219	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	0.230	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	0.218	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/01/19 14:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.231	0.002		mg/L	5	7440-38-2	
Barium	0.512	0.005		mg/L	5	7440-39-3	
Lead	0.221	0.003		mg/L	5	7439-92-1	
Selenium	0.234	0.005		mg/L	5	7782-49-2	
Zinc	0.208	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:05, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	50	10		ug/L	1	60-29-7	1
Acetone	Not detected	50		ug/L	1	67-64-1	1
Methyl iodide	48	1		ug/L	1	74-88-4	1
Carbon disulfide	45	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	49	5		ug/L	1	1634-04-4	1
Acrylonitrile	50	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	43	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	42	5		ug/L	1	75-71-8	1
Chloromethane	44	5		ug/L	1	74-87-3	1
Vinyl chloride	45	1		ug/L	1	75-01-4	1
Bromomethane	47	5		ug/L	1	74-83-9	1
Chloroethane	47	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	49	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	48	1		ug/L	1	75-35-4	1
Methylene chloride	49	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	49	1		ug/L	1	156-60-5	1

1-spiked at 50ug/L

Lab Sample ID: S01402.11 (continued)
Sample Tag: OBG-MW-3S MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:05, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1-Dichloroethane	50	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	50	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	47	1		ug/L	1	67-66-3	1
Bromochloromethane	50	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	51	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	51	50		ug/L	1	108-10-1	1
2-Hexanone	52	50		ug/L	1	591-78-6	1
Carbon tetrachloride	54	1		ug/L	1	56-23-5	1
Benzene	52	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	53	1		ug/L	1	107-06-2	1
Trichloroethene	52	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	53	1		ug/L	1	78-87-5	1
Bromodichloromethane	54	1		ug/L	1	75-27-4	1
Dibromomethane	53	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	54	1		ug/L	1	10061-01-5	1
Toluene	54	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	54	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	53	1		ug/L	1	79-00-5	1
Tetrachloroethene	52	1		ug/L	1	127-18-4	1
trans-1,4-Dichloro-2-butene	48	1		ug/L	1	110-57-6	1
Dibromochloromethane	51	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	50	1		ug/L	1	106-93-4	1
Chlorobenzene	51	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	52	1		ug/L	1	630-20-6	1
Ethylbenzene	52	1		ug/L	1	100-41-4	1
p,m-Xylene*	102	2		ug/L	1		1
o-Xylene	51	1		ug/L	1	95-47-6	1
Styrene	51	1		ug/L	1	100-42-5	1
Isopropylbenzene	52	5		ug/L	1	98-82-8	1
Bromoform	51	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	50	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	51	1		ug/L	1	96-18-4	1
n-Propylbenzene	52	1		ug/L	1	103-65-1	1
Bromobenzene	51	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	52	1		ug/L	1	108-67-8	1
tert-Butylbenzene	54	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	53	1		ug/L	1	95-63-6	1
sec-Butylbenzene	51	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	51	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	50	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	50	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	50	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	50	1		ug/L	1	526-73-8	1
n-Butylbenzene	51	1		ug/L	1	104-51-8	1
Hexachloroethane	50	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	49	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	51	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	51	5		ug/L	1	87-61-6	1

1-spiked at 50ug/L

Lab Sample ID: S01402.11 (continued)
Sample Tag: OBG-MW-3S MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 18:05, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Naphthalene	51	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	52	5		ug/L	1	91-57-6	1

1-spiked at 50ug/L

Lab Sample ID: S01402.12
Sample Tag: Trip Blank-043019
Collected Date/Time: 04/30/2019 00:01
Matrix: Water
COC Reference: 122821

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/02/19 13:12	JML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 13:00, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S01402.12 (continued)
Sample Tag: Trip Blank-043019

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/01/19 13:00, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID: S01402
Client: OBG02 (O'Brien & Gere Engineers, Inc.)
Project: RACER Hemphill Rd
Submitted: 04/30/2019 13:45 Login User: MMC

Attention: Clifford Yantz
Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@obg.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 3.8
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[X] Yes	[ ] No	[ ] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[ ] No	[X] N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S01402 Initials: MMC

Client: OBG02 (O'Brien & Gere Engineers, Inc.)

Project: RACER Hemphill Rd

Submitted: 04/30/2019 13:45 Login User:

Attention: Clifford Yantz
Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@obg.com

Lab ID	125 ml Plastic HNO_3	250 ml Plastic HNO_3	1 L Plastic HNO_3	250 ml Plastic H_2SO_4	125 ml Amber H_2SO_4	32 oz Glass HCl	125 ml Plastic NaOH	125 ml Amber $PbCO_3$ NaOH	pH					Notes
									<2	>12	other	ml add	new pH	
S01402.01	X								X					
S01402.01	X								X					
S01402.02	X								X					
S01402.02	X								X					
S01402.03	X								X					
S01402.03	X								X					
S01402.04	X								X					
S01402.04	X								X					
S01402.05	X								X					
S01402.05	X								X					
S01402.06	X								X					
S01402.06	X								X					
S01402.07	X								X					
S01402.07	X								X					
S01402.08	X								X					
S01402.08	X								X					
S01402.09	X								X					
S01402.09	X								X					
S01402.10	X								X					
S01402.10	X								X					
S01402.11	X								X					
S01402.11	X								X					

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

122821

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz
COMPANY: O'Brien & Gere
ADDRESS: 2260 East Saginaw
CITY: East Lansing STATE: MI ZIP CODE: 48823
PHONE NO.: 313-333-0211 FAX NO.:
P.O. NO.:
E-MAIL ADDRESS: clifford.yantz@obg.com
QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER Hemphill Rd
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	TOTAL As, Ba, Pb, Se, Zn	Dissolved As, Ba, Pb, Se, Zn	Special Instructions
01402.01	4/29/19	1008	OBG-MW-1S	GW	5		3	2					X	X	X	Dissolved Metals
.02		1130	OBG-MW-7S										X	X	X	were field filtered
.03		1313	OBG-MW-7D										X	X	X	
.04		1418	OBG-MW-6S										X	X	X	
.05		1553	OBG-MW-6D										X	X	X	
.06	↓	1553	OBG-MW-6D collocated										X	X	X	
.07	4/30/19	953	OBG-MW-2S										X	X	X	
.08		1053	OBG-MW-2D										X	X	X	
.09		1198	OBG-MW-3S		↓		↓	↓					X	X	X	
.10/.11		1148	OBG-MW-3S (MS/MSD)	↓	12		8	4					X	X	X	
.12	↓	—	Trip Blank - 043019	QC	1		1						X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	K Schneider OBG	X Sampler	DATE 4/30/19	TIME 1213
RECEIVED BY: SIGNATURE/ORGANIZATION	J M Miller		DATE 4/30/19	TIME 18:13
RELINQUISHED BY: SIGNATURE/ORGANIZATION	J M Miller		DATE 4/30/19	TIME 13:45
RECEIVED BY: SIGNATURE/ORGANIZATION	M Calcote		DATE 4/30/19	TIME 1345

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE	TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 3.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S01541.01(01)
Generated on 05/06/2019

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S01541.01-S01541.09
Project: RACER Hemphill Rd
Collected Date: 04/30/2019 - 05/02/2019
Submitted Date/Time: 05/02/2019 14:25
Sampled by: Kevin Schneider
P.O. #: PO

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.
Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

There is no additional narrative for this analytical report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003

Sample Summary (9 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S01541.01	DUP-1	Groundwater	04/30/19 00:01
S01541.02	OBG-MW-5S	Groundwater	04/30/19 13:30
S01541.03	Field Blank-043019	Water	04/30/19 14:00
S01541.04	OBG-OS-MW-3	Groundwater	05/01/19 00:01
S01541.05	OBG-OS-MW-4	Groundwater	05/01/19 12:40
S01541.06	OBG-OS-MW-5	Groundwater	05/01/19 13:40
S01541.07	OBG-OS-MW-1	Groundwater	05/02/19 10:40
S01541.08	OBG-OS-MW-2	Groundwater	05/02/19 11:30
S01541.09	Trip Blank-050219	Water	05/02/19 00:01

Lab Sample ID: S01541.01
Sample Tag: DUP-1
Collected Date/Time: 04/30/2019 00:01
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/06/19 12:20	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 10:51, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.004	0.002		mg/L	5	7440-38-2	
Barium	1.06	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	0.009	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 10:53, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.004	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	1.06	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 16:26, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.01 (continued)
Sample Tag: DUP-1

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 16:26, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.02
Sample Tag: OBG-MW-5S
Collected Date/Time: 04/30/2019 13:30
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/06/19 12:20	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 10:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.004	0.002		mg/L	5	7440-38-2	
Barium	1.02	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	0.009	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 10:59, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.004	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	1.01	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 16:45, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.02 (continued)
Sample Tag: OBG-MW-5S

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 16:45, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.03
Sample Tag: Field Blank-043019
Collected Date/Time: 04/30/2019 14:00
Matrix: Water
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/06/19 12:20	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 10:40, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	Not detected	0.005		mg/L	2	7440-39-3	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 17:05, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	2	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	

Lab Sample ID: S01541.03 (continued)
Sample Tag: Field Blank-043019

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 17:05, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.04
Sample Tag: OBG-OS-MW-3
Collected Date/Time: 05/01/2019 00:01
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/06/19 12:20	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 11:01, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.018	0.002		mg/L	5	7440-38-2	
Barium	0.126	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 11:03, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.017	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.117	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 17:25, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.04 (continued)
Sample Tag: OBG-OS-MW-3

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 17:25, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.05
Sample Tag: OBG-OS-MW-4
Collected Date/Time: 05/01/2019 12:40
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/06/19 12:20	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 11:10, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.003	0.002		mg/L	5	7440-38-2	
Barium	1.17	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 11:11, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.003	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	1.12	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 23:16, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.05 (continued)
Sample Tag: OBG-OS-MW-4

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/05/19 23:16, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	9	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	7	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	12	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	2	1		ug/L	1	95-63-6	
sec-Butylbenzene	3	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	5	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	3	1		ug/L	1	526-73-8	
n-Butylbenzene	2	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	19	5		ug/L	1	91-20-3	
2-Methylnaphthalene	44	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.06
Sample Tag: OBG-OS-MW-5
Collected Date/Time: 05/01/2019 13:40
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/05/19 13:30	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 11:14, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	0.002		mg/L	5	7440-38-2	
Barium	2.37	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	0.006	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 11:17, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	Not detected	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	2.25	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	0.008	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 02:37, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.06 (continued)
Sample Tag: OBG-OS-MW-5

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 02:37, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	7	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	3	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.07
Sample Tag: OBG-OS-MW-1
Collected Date/Time: 05/02/2019 10:40
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/05/19 13:30	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 11:20, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.031	0.002		mg/L	5	7440-38-2	
Barium	0.928	0.005		mg/L	5	7440-39-3	
Lead	Not detected	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	Not detected	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 11:23, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.028	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.922	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	0.007	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 02:57, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.07 (continued)
Sample Tag: OBG-OS-MW-1

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 02:57, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.08
Sample Tag: OBG-OS-MW-2
Collected Date/Time: 05/02/2019 11:30
Matrix: Groundwater
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/05/19 13:30	JML	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	
Metal Digestion	Completed	SW3015A	05/03/19 09:30	CCM	

Metals

Method: E200.8, Run Date: 05/03/19 11:25, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	0.050	0.002		mg/L	5	7440-38-2	
Barium	0.223	0.005		mg/L	5	7440-39-3	
Lead	0.004	0.003		mg/L	5	7439-92-1	
Selenium	Not detected	0.005		mg/L	5	7782-49-2	
Zinc	0.010	0.005		mg/L	5	7440-66-6	

Method: E200.8, Run Date: 05/03/19 11:28, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic, Dissolved	0.041	0.002		mg/L	5	7440-38-2	
Barium, Dissolved	0.216	0.005		mg/L	5	7440-39-3	
Lead, Dissolved	Not detected	0.003		mg/L	5	7439-92-1	
Selenium, Dissolved	Not detected	0.005		mg/L	5	7782-49-2	
Zinc, Dissolved	Not detected	0.005		mg/L	5	7440-66-6	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 03:17, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	

Lab Sample ID: S01541.08 (continued)
Sample Tag: OBG-OS-MW-2

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 03:17, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Lab Sample ID: S01541.09
Sample Tag: Trip Blank-050219
Collected Date/Time: 05/02/2019 00:01
Matrix: Water
COC Reference: 122820

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/05/19 13:30	JML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 00:38, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S01541.09 (continued)
Sample Tag: Trip Blank-050219

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/04/19 00:38, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID: S01541
Client: OBG02 (O'Brien & Gere Engineers, Inc.)
Project: RACER Hemphill Rd
Submitted: 05/02/2019 14:25 Login User: SRS

Attention: Clifford Yantz
Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@obg.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 5.3
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[X] Yes	[ ] No	[ ] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S01541 Initials: SRS

Client: OBG02 (O'Brien & Gere Engineers, Inc.)

Project: RACER Hemphill Rd

Submitted: 05/02/2019 14:25 Login User:

Attention: Clifford Yantz
Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@obg.com

Lab ID	125 ml Plastic HNO_3	250 ml Plastic HNO_3	1 L Plastic HNO_3	250 ml Plastic H_2SO_4	125 ml Amber H_2SO_4	32 oz Glass HCl	125 ml Plastic NaOH	125 ml Amber $PbCO_3$ NaOH	pH					Notes
									<2	>12	other	ml add	new pH	
S01541.01	X										5	0.5	<2	Lot# 213500
S01541.01	X										5	0.5	<2	Lot# 213500
S01541.02	X										5	0.5	<2	Lot# 213500
S01541.02	X										5	0.5	<2	Lot# 213500
S01541.03	X								X					
S01541.04	X								X					
S01541.04	X								X					
S01541.05	X										5	0.5	<2	Lot# 213500
S01541.05	X										5	0.5	<2	Lot# 213500
S01541.06	X								X					
S01541.06	X								X					
S01541.07	X								X					
S01541.07	X								X					
S01541.08	X								X					
S01541.08	X								X					

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

122820

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz
COMPANY: O'Brien & Gere
ADDRESS: 2260 East Saginaw
CITY: East Lansing STATE: MI ZIP CODE: 48823
PHONE NO.: 313-333-0211 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: clifford.yantz@obg.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER Hemphill Rd
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Ken Schneider

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	TOTAL As, Ba, Pb, Se, Zn	Dissolved As, Ba, Pb, Se, Zn	Special Instructions
01541.01	4/30/19	—	DUP-1	GW	5		3	2					X	X	X	Dissolved Metals were field filtered
.02	↓	1330	OBG-MW-5S	GW	5		3	2					X	X	X	
.03	↓	1400	Field Blank-043019	QC	4		3	1					X	X		
.04	5/1/19		OBG-OS-MW-3	GW	5		3	2					X	X	X	
.05	↓	1240	OBG-OS-MW-4	GW	5		3	2					X	X	X	
.06	↓	1340	OBG-OS-MW-5	GW	5		3	2					X	X	X	
.07	5/2/19	1040	OBG-OS-MW-1	GW	5		3	2					X	X	X	
.08	↓	1130	OBG-OS-MW-2	GW	5		3	2					X	X	X	
.09	↓	—	Trip Blank-050219	QC	1		1						X			

KBJ

RELINQUISHED BY: SIGNATURE/ORGANIZATION	X Sampler	DATE 5/2/19	TIME 1305
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 5/2/19	TIME 1305
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 5/2/19	TIME 1425
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 5/2/19	TIME 1425

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME
RECEIVED BY: SIGNATURE/ORGANIZATION — DATE — TIME

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS
SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL 5.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

OBG

THERE'S A WAY