



Memorandum

August 11, 2017

To:	Darlene Pearson, MDEQ	Ref. No.:	017360-T08Y17
From:	Jeni Quigley/md/89 <i>JQ</i>	Tel:	269.685.2725
cc:	Dave Favero, RACER Trust		
Subject:	Spring 2017 Semi-Annual Groundwater Monitoring Report Former Grand Rapids Metal Plant Wyoming, Michigan		

GHD, on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, conducted groundwater monitoring activities at the former Grand Rapids Metal Plant property located at 300 36th Street SW in Wyoming, Michigan (Site). The samples were collected during the field event conducted between April 5 and April 13, 2017. Sampling was completed in accordance with the methodology described in the 2005 Groundwater Monitoring Work Plan submitted on April 12, 2005 to the Michigan Department of Environmental Quality (MDEQ) and verbally approved on April 28, 2005. Modifications to the aforementioned Work Plan were proposed in a memorandum submitted to the MDEQ on June 3, 2014. The proposed changes included a reduction in the number of monitoring locations and sample analysis parameters. The MDEQ approved the proposed modifications on August 24, 2014. This memorandum (Memorandum) has been prepared to present the results of the Spring 2017 Semi-Annual Groundwater Monitoring activities.

1. Spring 2017 Monitoring Activities

The scope of work (SOW) for the semi-annual groundwater monitoring program conducted at the Site includes: the collection and analysis of groundwater/surface water samples for Target Compound List (TCL) volatile organic compounds (VOCs) from monitoring wells and culvert locations; the collection and analysis of groundwater samples for TCL semi volatile organic compounds (SVOCs) from monitoring wells 85-6, MW44-12, MW45-12, MW46-12, MW50-12, MW51-12, and MW52-12; the collection and analysis of groundwater samples for Site specific Target Analyte List (TAL) metals from monitoring wells MW59-14 and MW60-14; the measurement of static groundwater levels in all monitoring wells; and the monitoring for the potential presence and measurement of light non aqueous phase liquid (LNAPL) levels, if present, in select Site monitoring wells 85-6, MW44-12, MW45-12, MW46-12, MW50-12, MW51-12, and MW52-12.

A total of 44 groundwater samples, including quality assurance/quality control (QA/QC) samples, were collected from 39 monitoring wells. A total of three surface water samples were collected from culvert locations C-1, C-2, and C-3. All samples were collected between April 5 and April 13, 2017 for analysis of TCL VOCs, TCL SVOCs, and/or TAL metals. Table 1 presents a summary of the samples collected during the Spring 2017 Semi-Annual Groundwater Monitoring sampling event.



Dedicated ¼-inch diameter polyethylene tubing is utilized in each of the wells to be sampled. The bottom intake of the tubing was set in the middle of the screened interval for each of the wells. All wells were purged with a peristaltic pump using low flow purge (LFP) techniques. Wells were purged between 100 and 150 milliliters (mL) per minute with continuous monitoring to confirm less than 0.3 feet of drawdown of the water level. Groundwater quality measurements were recorded in consecutive timed intervals using an YSI® water quality meter and HACH® turbidity meter. Groundwater quality parameters included pH, specific conductivity, temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity. Upon stabilization of field measured water quality parameters, based on three consecutive similar readings, groundwater samples were collected. Groundwater quality measurements are presented in Table 2.

Water samples collected from Cole Drain at the culvert locations C-1, C-2, and C-3 were collected using a new disposable polyethylene sampling bottle at each location.

2. Groundwater Elevations and LNAPL

Prior to groundwater sample collection, static water levels were measured and recorded for the monitoring wells. Well caps were unlocked and removed allowing the water levels in the wells to stabilize. Static water levels and LNAPL levels, if present, were measured relative to the top of each riser. Table 3 presents static water levels for April 5, 2017. Figure 1 presents the approximate groundwater flow direction for April 5, 2017.

No measurable thickness of LNAPL was detected in monitoring wells 85-6, MW44-12, MW45-12, MW46-12, MW50-12, MW51-12, or MW52-12. Sheen was detected in monitoring well MW43-12 using an oil/water interface probe, which detects LNAPL on the top of the water column. Sheen has historically been observed in monitoring wells in this area; sheen is defined as LNAPL with a thickness of less than 0.01 feet.

3. Analytical Results

Analytical results for groundwater samples were evaluated against the Generic Residential and Non Residential Cleanup Criteria and Screening Levels established in Part 7 of Administrative Rules, effective December 30, 2013, pursuant to Part 201, Environmental Remediation, 1994 PA 451, as amended. Analytical results for groundwater compared to the aforementioned criteria are presented in Table 4. Analytical results for surface water samples collected are presented in Table 5. Figure 2 presents a summary of groundwater samples analyzed for TAL metals from the last seven monitoring events. Figure 3 presents a summary of groundwater samples analyzed for TCL VOCs and TCL SVOCs from the last seven monitoring events. Analytical results for groundwater samples are generally consistent with concentrations and constituents identified during previous monitoring events.

A QA/QC data validation was conducted on the analytical laboratory data. Copies of analytical laboratory data and data validation memorandum summarizing the results of the data validation are presented in Attachment A and Attachment B, respectively. Estimated concentrations are identified in the tables of the memorandum which include qualifications due to contamination in the method blank and outlying matrix spike/matrix spike duplicate percent recovery and relative percent difference. Based on the review of the data validation memorandum, the data produced by ALS MI were found to exhibit acceptable levels of



accuracy and precision and may be used with the qualifications noted in the tables in the data validation memoranda. Data was qualified for iron for the groundwater sample collected from MW60-14 due to detection of iron in the method blank. Data was qualified for 3,3'-Dichlorobenzidine for the groundwater sample collected from MW45-12 due to outlying matrix spike/matrix spike duplicate results. Additional details regarding the qualified data are presented in the data validation memorandum included in Attachment B. The data qualifications do not affect the conclusions presented in this report.

2-butanone/methyl ethyl ketone (MEK) and acetone were detected at estimated concentrations in each of the surface water samples collected at culvert locations C-1, C-2, and C-3. The detection of these compounds may be attributable to laboratory contamination as 2-butanone/MEK and acetone are common lab contaminants, although not specifically identified in the trip blank. As a screening tool, the results of the surface water samples were compared to the Rule 57 Water Quality Values. The sample results at each location did not exceed any of the Rule 57 values.

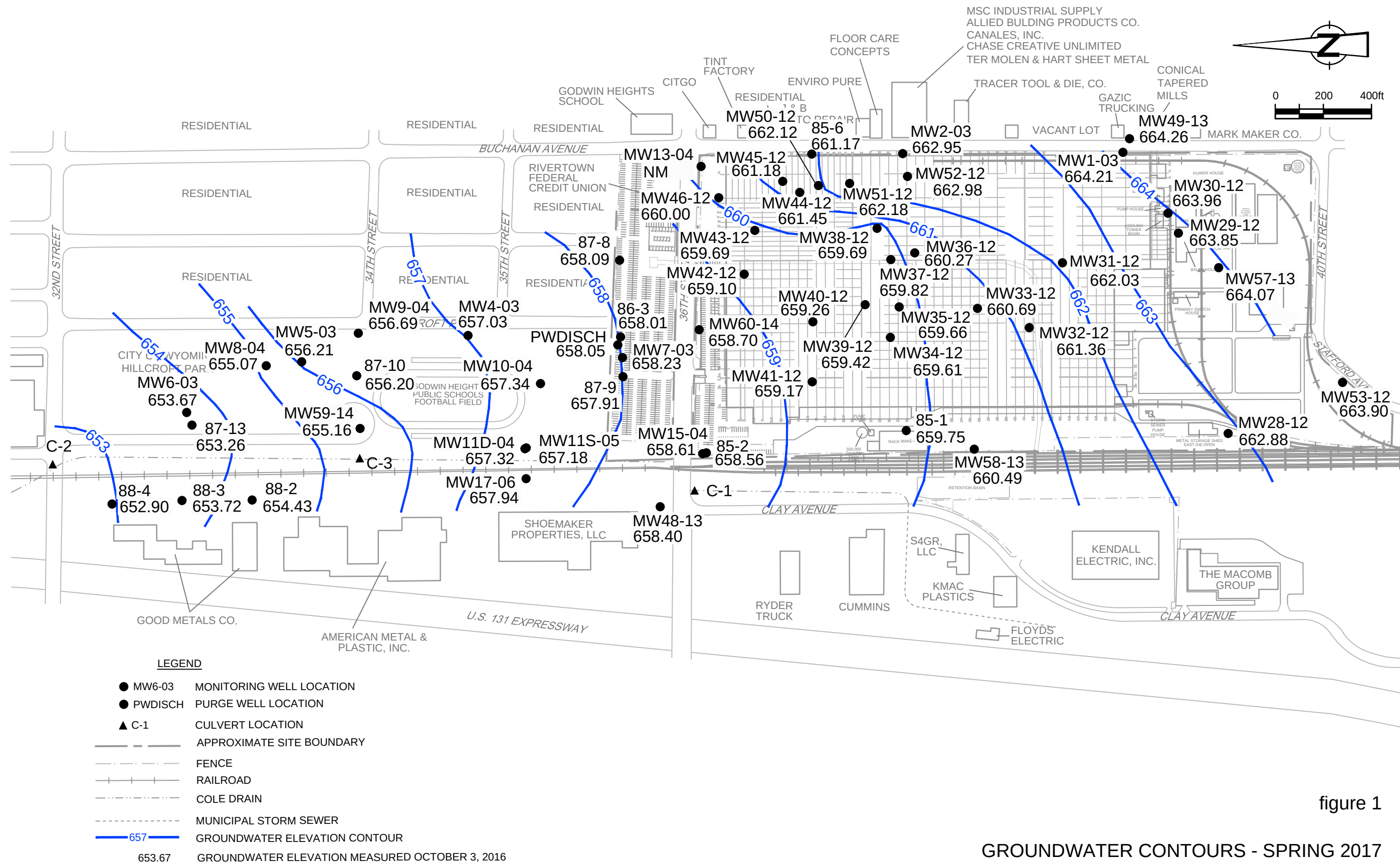
4. Conclusions and Recommendations

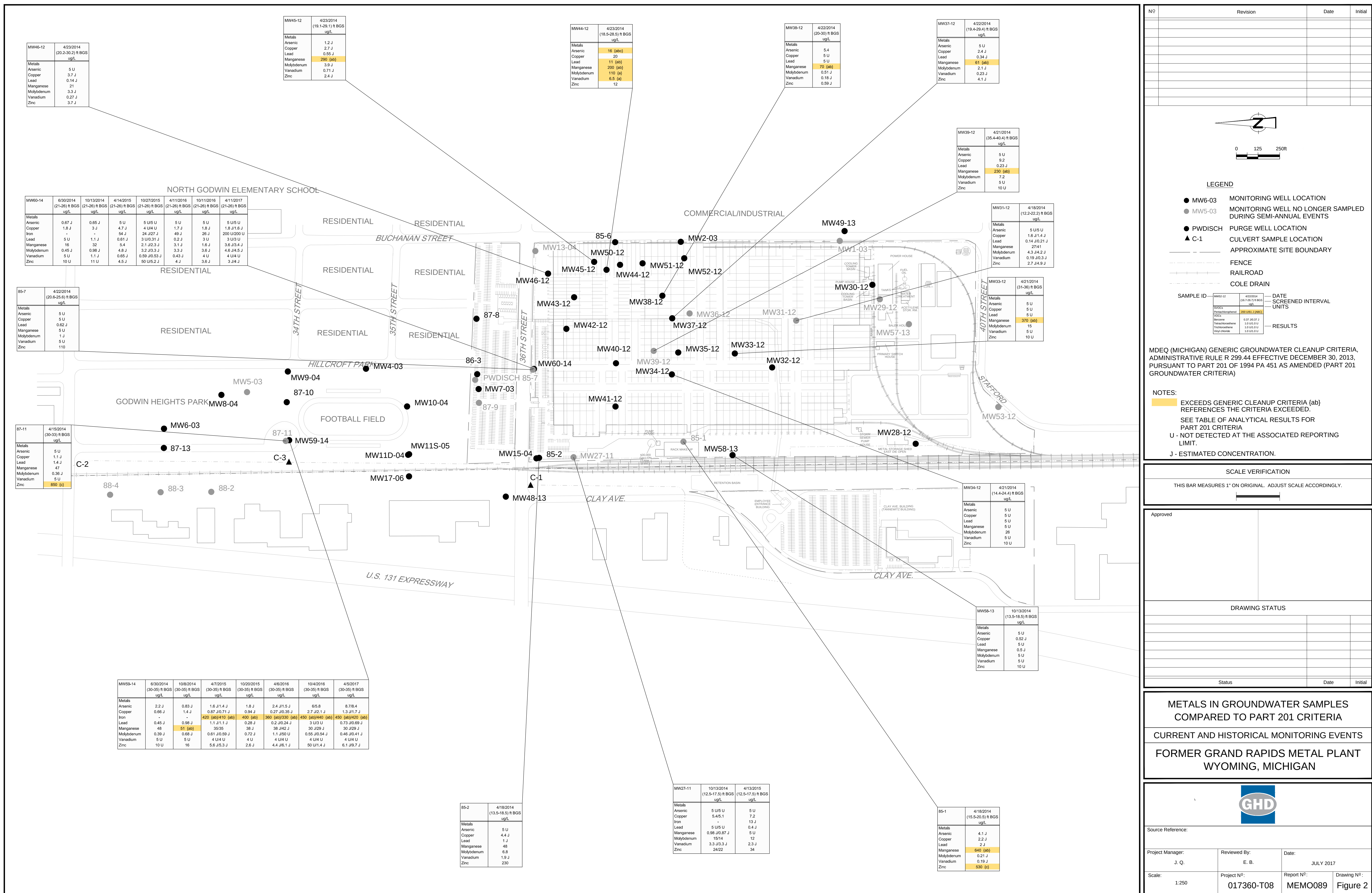
The analytical results for the groundwater and surface water samples were consistent with previously conducted monitoring events. The concentrations of trichloroethene (TCE) in the area of the former degreaser release (near MW35-12) have continued to decrease, consistent with the previous monitoring events, indicating the stabilization of the increasing trend related to slab removal in 2011 and 2012. Groundwater TCE concentration contours are presented on Figure 4. The concentrations of PCE, and associated degradation products, in wells located along and near the up-gradient, eastern property boundary have shown an increasing trend in previously conducted monitoring events. This monitoring event, the concentrations of PCE, and associated degradation products, have decreased from the previous monitoring event, with the exception of MW2-03 that increased slightly from 2.6 µg/L to 4.0 µg/L, which is below the most stringent Part 201 Cleanup Criteria. This indicates that the up-gradient off-Site plume is continuing to migrate onto the Site. Groundwater PCE concentration contours are presented on Figure 5. PCE was also detected in MW17-06 consistent with previously conducted sampling, further indicating the presence of another separate off-Site plume to the west of Cole Drain. Concentrations of TCE in on-Site and off-Site monitoring wells down-gradient of the former degreaser release area continue to show stable or decreasing trends. Concentration versus time graphs for source area and select down-gradient monitoring wells were developed for TCE to illustrate the observed trends in concentrations for both the overall timeframe each well has been present and the timeframe immediately prior to and after slab removal. It should be noted that some of the graphs include two sets of wells; these represent pre-demolition and post-demolition conditions in those locations, as the original wells were destroyed during decommissioning and demolition activities. The concentration versus time graphs are presented in Attachment C. TCE was detected in three monitoring wells with Site-related concentrations above criteria. TCE was detected at concentrations of 5.7 µg/L, 25 µg/L, and 12 µg/L from the samples collected from MW37-12, MW35-12 and MW 17-06, respectively, which are above the Residential (5 µg/L) and Non-residential Drinking Water Criteria (5 µg/L). The highest concentration of TCE detected, 25 µg/L at MW35-12, is located in closest proximity to the former degreaser release area.

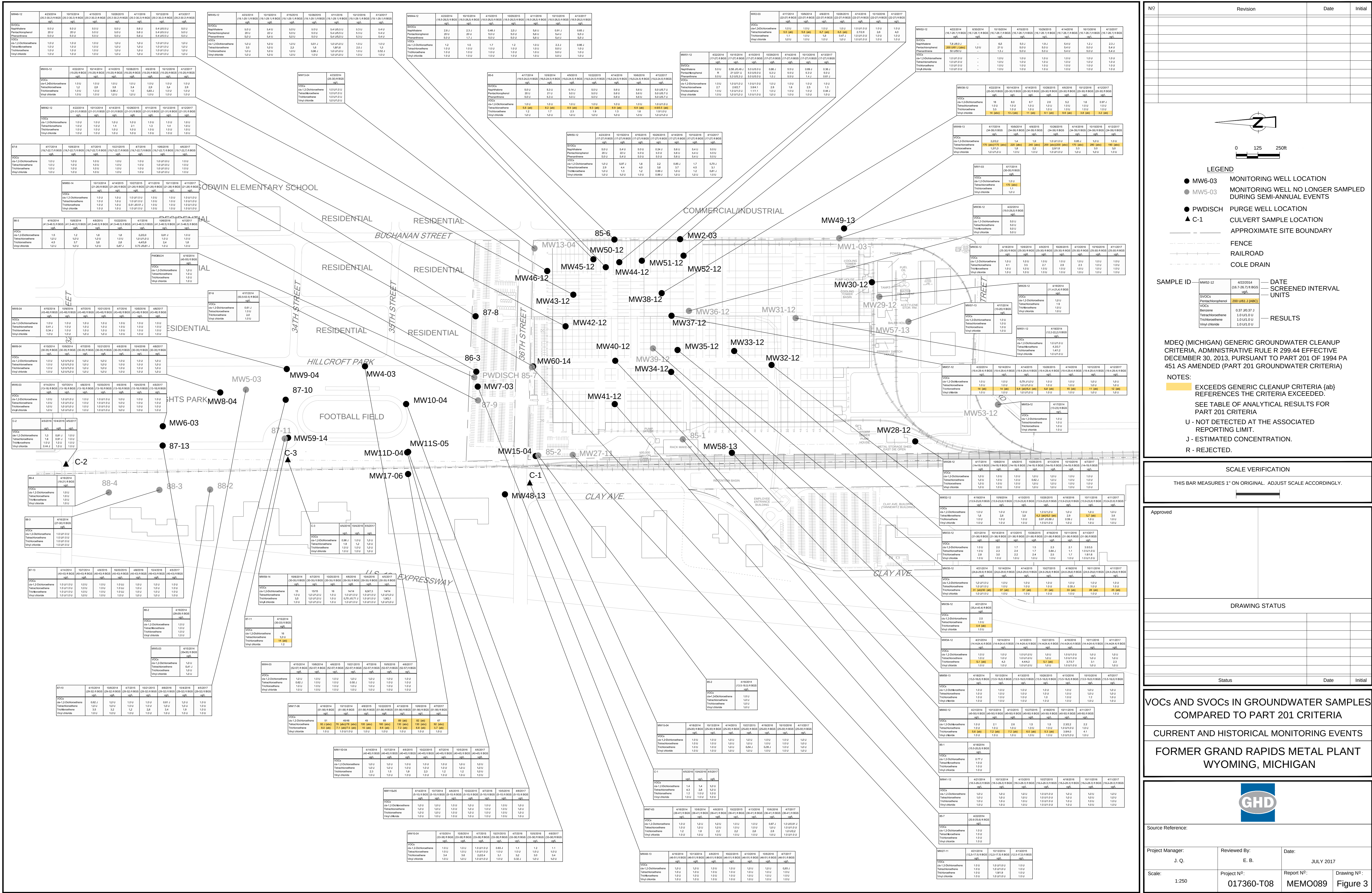


Due to the observed decreasing trends in TCE concentrations and the few TCE criteria exceedances; not completing the Fall 2017 semi-annual monitoring event and proceeding with the Spring 2018 semi-annual monitoring event is recommended, unless a different plan is approved per MDEQ's review of the No Further Action (NFA) Report. The Spring 2018 semi-annual monitoring event will be conducted consistent with the currently approved monitoring program. A NFA is currently being developed for the Site, including a Post Closure Monitoring Plan.

Please contact David Favero at 734.879.9525 or Jeni Quigley at 269.685.2725 with any questions regarding this Memorandum or the enclosed information.







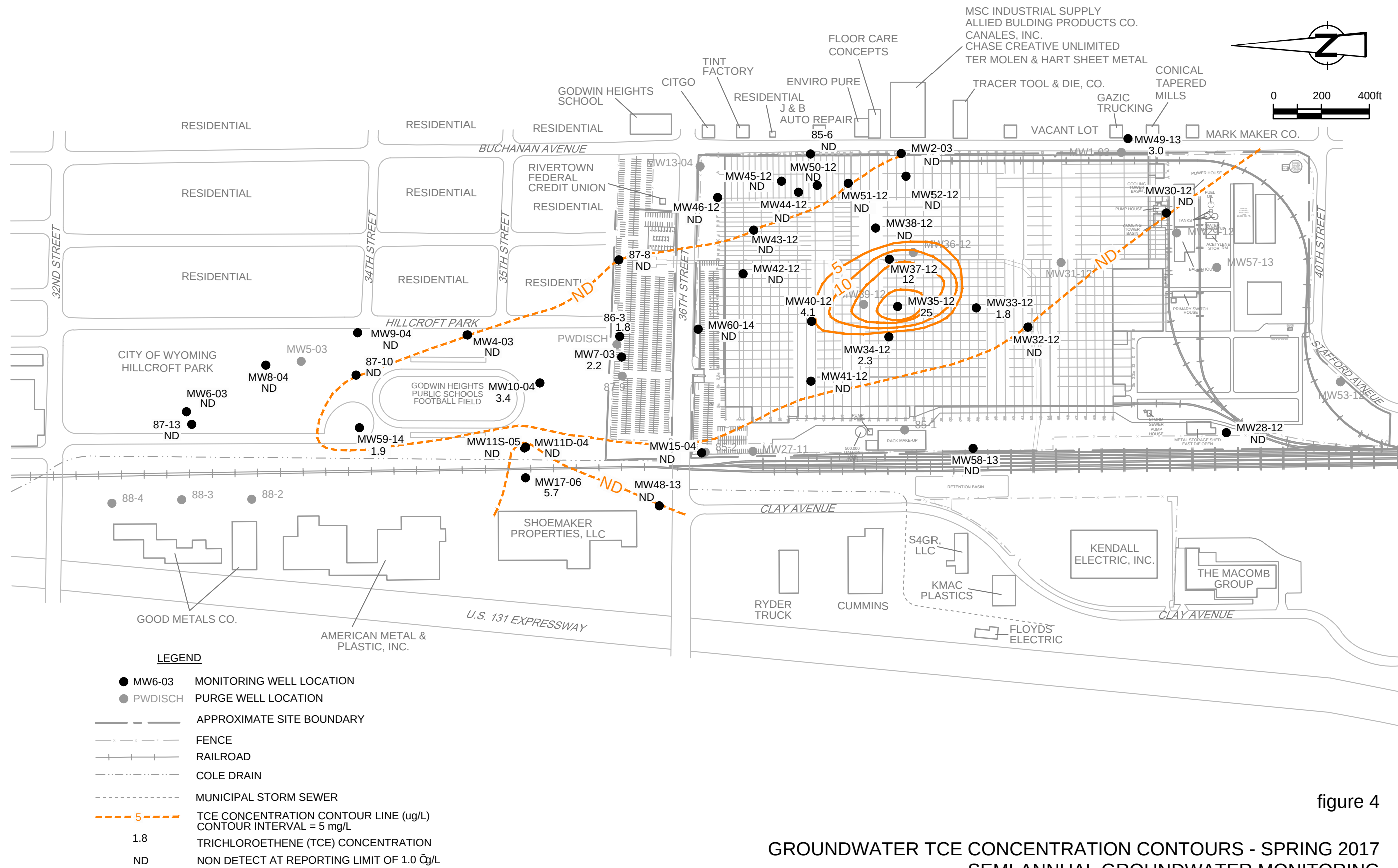


figure 4

GROUNDWATER TCE CONCENTRATION CONTOURS - SPRING 2017
SEMI-ANNUAL GROUNDWATER MONITORING
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan



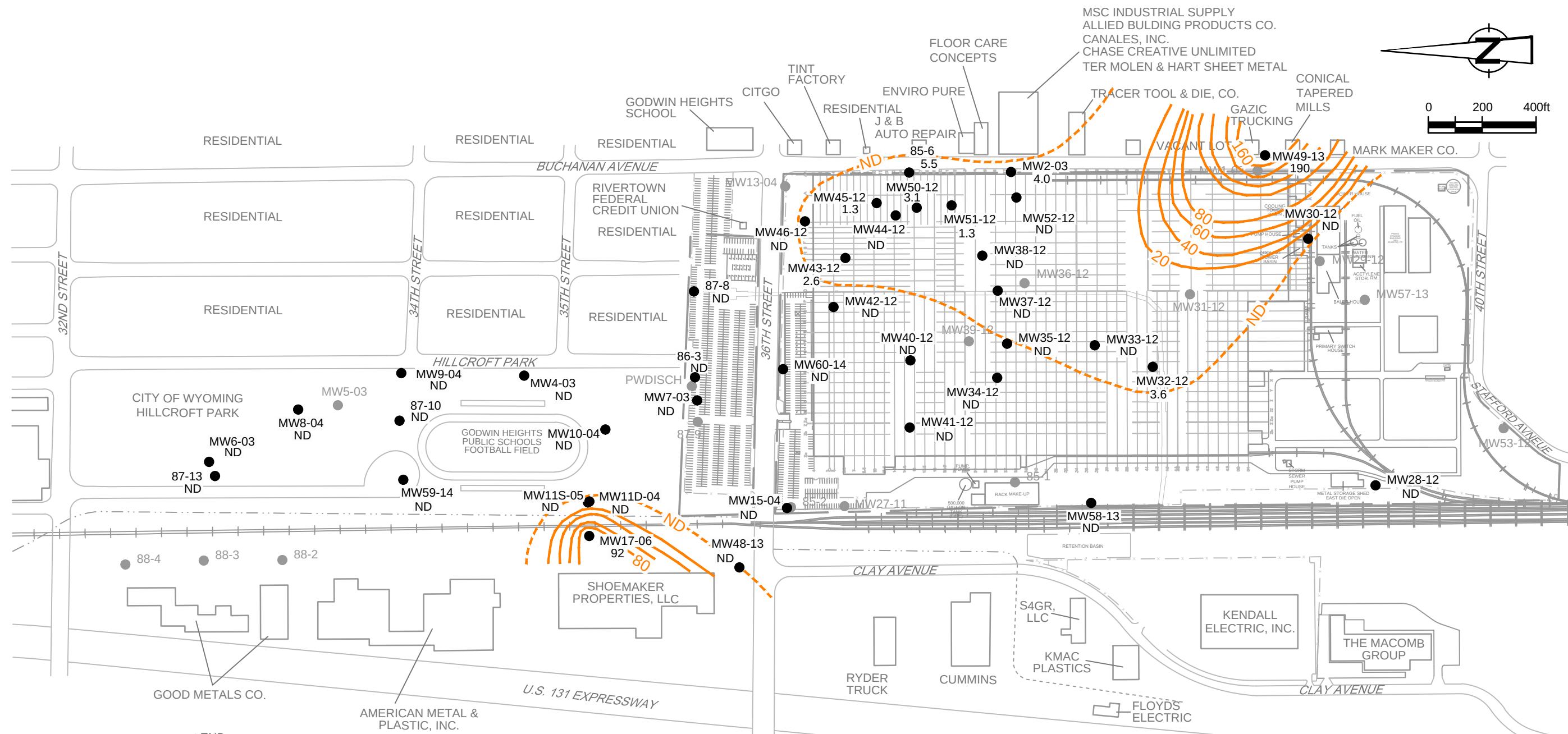


figure 5

GROUNDWATER PCE CONCENTRATION CONTOURS - SPRING 2017
SEMI-ANNUAL GROUNDWATER MONITORING
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan



Table 1

Sample Summary
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017

Sample Date	Sample Identification	Sample Location	Matrix	Sample Depth (ft bgs)			QC Sample	Analysis
4/5/2017	SW-017360-040517-MR-001	C-1	Water	-	to	-		VOCs
4/5/2017	SW-017360-040517-MR-002	C-2	Water	-	to	-		VOCs
4/5/2017	SW-017360-040517-MR-003	C-3	Water	-	to	-		VOCs
4/5/2017	WG-017360-040517-MR-004	MW6-03	Water	13	to	18		VOCs
4/5/2017	WG-017360-040517-MR-005	87-13	Water	40	to	43		VOCs
4/5/2017	WG-017360-040517-MR-006	MW59-14	Water	30	to	35		VOCs, Metals
4/5/2017	WG-017360-040517-MR-007	MW59-14	Water	30	to	35	Duplicate (-007)	VOCs, Metals
4/5/2017	WG-017360-040517-MR-008	87-10	Water	29	to	32		VOCs
4/6/2017	WG-017360-040617-MR-009	MW9-04	Water	43	to	48		VOCs
4/6/2017	WG-017360-040617-MR-010	MW8-04	Water	30	to	35		VOCs
4/6/2017	WG-017360-040617-MR-011	MW4-03	Water	52	to	57		VOCs
4/6/2017	WG-017360-040617-MR-012	MW10-04	Water	33	to	38		VOCs
4/6/2017	WG-017360-040617-MR-013	MW11S-05	Water	5	to	10	MS/MSD	VOCs
4/6/2017	WG-017360-040617-MR-014	MW11D-04	Water	40	to	45		VOCs
4/6/2017	WG-017360-040617-MR-015	87-8	Water	19.7	to	22.7		VOCs
4/7/2017	WG-017360-040717-MR-016	MW48-13	Water	46	to	51		VOCs
4/7/2017	WG-017360-040717-MR-017	MW17-06	Water	51	to	56	MS/MSD	VOCs
4/7/2017	WG-017360-040717-MR-018	MW7-03	Water	36	to	41	Duplicate (-019)	VOCs
4/7/2017	WG-017360-040717-MR-019	MW7-03	Water	36	to	41		VOCs
4/7/2017	WG-017360-040717-MR-020	86-3	Water	41.5	to	46.5		VOCs
4/7/2017	WG-017360-040717-MR-021	MW28-12	Water	14	to	19		VOCs
4/7/2017	WG-017360-040717-MR-022	MW58-13	Water	13.5	to	18.5		VOCs
4/11/2017	WG-017360-041117-MR-023	MW30-12	Water	25	to	30		VOCs
4/11/2017	WG-017360-041117-MR-024	MW32-12	Water	13.9	to	23.9		VOCs
4/11/2017	WG-017360-041117-MR-025	MW33-12	Water	31	to	36		VOCs
4/11/2017	WG-017360-041117-MR-026	MW33-12	Water	31	to	36	Duplicate (-025)	VOCs
4/11/2017	WG-017360-041117-MR-027	MW35-12	Water	24.6	to	29.6		VOCs
4/11/2017	WG-017360-041117-MR-028	MW34-12	Water	14.4	to	24.4		VOCs
4/11/2017	WG-017360-041117-MR-029	MW40-12	Water	45	to	50		VOCs
4/11/2017	WG-017360-041117-MR-030	MW41-12	Water	18.3	to	28.3		VOCs
4/11/2017	WG-017360-041117-MR-031	MW15-04	Water	25	to	30		VOCs
4/11/2017	WG-017360-041117-MR-032	MW60-14	Water	21	to	16		VOCs
4/11/2017	WG-017360-041117-MR-033	MW60-14	Water	21	to	16	Duplicate (-032)	VOCs, Metals
4/12/2017	WG-017360-041217-MR-034	MW42-12	Water	21	to	31		VOCs, Metals
4/12/2017	WG-017360-041217-MR-035	MW37-12	Water	19.4	to	29.4		VOCs
4/12/2017	WG-017360-041217-MR-036	MW38-12	Water	20	to	30		VOCs
4/12/2017	WG-017360-041217-MR-037	MW43-12	Water	15	to	25		VOCs
4/12/2017	WG-017360-041217-MR-038	MW49-13	Water	34	to	39		VOCs
4/12/2017	WG-017360-041217-MR-039	MW2-03	Water	22	to	27	MS/MSD	VOCs
4/12/2017	WG-017360-041217-MR-040	85-6	Water	19.5	to	24.5		VOCs, SVOCs
4/12/2017	WG-017360-041217-MR-041	85-6	Water	19.5	to	24.5	Duplicate (-040)	VOCs, SVOCs
4/13/2017	WG-017360-041317-MR-042	MW52-12	Water	16.7	to	26.7		VOCs, SVOCs
4/13/2017	WG-017360-041317-MR-043	MW51-12	Water	17	to	27		VOCs, SVOCs
4/13/2017	WG-017360-041317-MR-044	MW50-12	Water	17	to	27		VOCs, SVOCs
4/13/2017	WG-017360-041317-MR-045	MW44-12	Water	18.5	to	28.5		VOCs, SVOCs
4/13/2017	WG-017360-041317-MR-046	MW45-12	Water	19.1	to	29.1	MS/MSD	VOCs, SVOCs
4/13/2017	WG-017360-041317-MR-047	MW46-12	Water	20.2	to	30.2		VOCs, SVOCs

Table 2

**Groundwater Quality Parameters
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017**

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/per min.)	Water Level (ft. BTOR)	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mv)
85-6	4/12/2017	16:03	110	16.64	13.22	1.834	2.29	4.61	7.23	33.9
		16:08	110	16.64	13.26	1.831	2.26	4.51	7.23	34.1
		16:13	110	16.64	13.30	1.840	2.07	4.76	7.23	33.6
86-3	4/7/2017	13:10	100	18.70	14.40	1.137	1.56	0.31	7.65	1.2
		13:15	100	18.70	14.31	1.133	1.42	0.30	7.64	1.3
		13:20	100	18.70	14.26	1.136	1.32	0.28	7.64	1.1
87-8	4/6/2017	16:33	100	18.61	11.08	1.444	1.78	3.77	7.32	-5.1
		16:38	100	18.61	11.02	1.441	1.54	3.58	7.31	-5.2
		16:43	100	18.61	11.00	1.439	1.30	3.49	7.31	-5.3
87-10	4/5/2017	14:05	120	11.74	10.95	0.772	3.26	4.58	7.72	7.9
		14:10	120	11.74	10.99	0.768	2.99	4.84	7.73	7.9
		14:15	120	11.74	10.97	0.768	2.71	4.85	7.72	7.5
87-13	4/5/2017	11:40	130	10.35	10.22	1.565	2.23	5.57	7.15	8.4
		11:45	130	10.35	10.19	1.563	1.99	5.43	7.13	6.3
		11:50	130	10.35	10.15	1.562	1.90	5.09	7.13	5.5
MW2-03	4/12/2017	15:27	130	16.84	13.53	2.339	3.36	4.40	7.33	36.1
		15:32	130	16.84	13.88	2.335	2.81	4.44	7.33	35.6
		15:37	130	16.84	13.67	2.337	2.11	4.41	7.32	34.9
MW4-03	4/6/2017	11:48	120	21.95	11.86	1.507	2.49	0.47	7.24	-2.0
		11:53	120	21.95	11.89	1.505	2.20	0.46	7.24	-2.4
		11:58	120	21.95	11.90	1.502	2.06	0.48	7.24	-2.7
MW6-03	4/5/2017	11:20	120	11.76	10.30	1.446	2.19	5.71	7.04	11.4
		11:25	120	11.76	10.20	1.447	1.78	5.70	7.06	11.3
		11:30	120	11.76	10.11	1.447	1.04	5.71	7.07	10.8

Table 2

**Groundwater Quality Parameters
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017**

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/per min.)	Water Level (ft. BTOR)	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mv)
MW7-03	4/7/2017	12:46	100	16.40	14.37	1.627	1.66	0.40	7.38	1.0
		12:51	100	16.40	14.12	1.621	1.48	0.39	7.38	1.1
		12:56	100	16.40	14.10	1.619	1.52	0.38	7.38	2.0
MW8-04	4/6/2017	10:26	110	19.08	9.81	1.155	1.97	5.45	7.07	8.9
		10:31	110	19.08	9.80	1.154	1.61	5.35	7.11	8.8
		10:36	110	19.08	9.82	1.151	1.44	5.46	7.14	8.7
MW9-04	4/6/2017	11:01	100	21.47	12.45	1.514	2.12	3.44	7.36	2.3
		11:06	100	21.47	12.44	1.510	1.80	3.54	7.38	1.7
		11:11	100	21.47	12.52	1.515	1.63	3.42	7.40	1.1
MW10-04	4/6/2017	12:41	150	8.75	10.73	1.350	2.14	0.10	7.37	0.1
		12:46	150	8.75	10.85	1.353	1.95	0.09	7.36	-0.3
		12:51	150	8.75	10.91	1.352	1.97	0.10	7.36	-1.2
MW11S-05	4/6/2017	14:10	140	6.11	8.75	0.943	6.00	7.67	6.93	17.1
		14:15	140	6.11	8.60	0.942	6.08	7.47	6.93	17.0
		14:20	140	6.11	8.54	0.941	5.99	7.40	6.93	16.8
MW11D-04	4/6/2017	14:27	150	5.62	10.87	2.213	2.01	3.90	7.07	-1.9
		14:32	150	5.62	10.98	2.217	1.96	3.93	7.09	-2.7
		14:37	150	5.62	11.02	2.220	1.90	3.96	7.10	-3.4
MW15-04	4/11/2017	16:12	110	12.77	12.64	1.336	3.11	3.60	7.21	31.0
		15:17	110	12.77	12.81	1.339	3.04	3.78	7.17	26.3
		16:22	110	12.77	12.87	1.340	2.75	3.87	7.15	25.8
MW17-06	4/7/2017	11:17	100	6.57	12.22	2.322	1.63	2.16	7.13	3.5
		11:22	100	6.57	12.22	2.316	1.40	2.19	7.13	3.0
		11:27	100	6.57	12.43	2.313	1.27	2.20	7.14	3.0

Table 2

**Groundwater Quality Parameters
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017**

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/per min.)	Water Level (ft. BTOR)	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mv)
MW28-12	4/7/2017	15:10	100	13.42	12.13	1.030	1.19	7.00	7.31	11.0
		15:15	100	13.42	12.34	1.021	1.20	7.88	7.30	11.5
		15:20	100	13.42	12.29	1.026	1.13	7.88	7.29	11.0
MW30-12	4/11/2017	10:17	100	11.86	10.48	1.218	2.88	4.94	6.96	30.4
		10:22	100	11.86	10.47	1.217	2.35	4.81	6.99	30.1
		10:27	100	11.86	10.45	1.216	2.19	4.81	7.00	29.8
MW32-12	4/11/2017	10:53	110	13.60	9.79	0.808	5.95	1.78	7.69	26.4
		10:58	110	13.60	9.91	0.807	5.78	1.70	7.70	26.4
		11:03	110	13.60	9.97	0.804	5.64	1.50	7.70	26.4
MW33-12	4/11/2017	11:50	100	17.43	12.08	1.129	3.15	1.43	9.77	-20.8
		11:55	100	17.43	12.15	1.130	3.03	1.43	9.81	-24.6
		12:00	100	17.43	12.29	1.132	2.84	1.45	9.85	-27.9
MW34-12	4/11/2017	13:46	110	14.45	12.13	0.666	2.39	8.72	7.99	35.7
		13:51	110	14.45	12.09	0.668	2.15	8.38	7.97	35.9
		13:56	110	14.45	12.11	0.668	2.26	8.25	7.95	35.7
MW35-12	4/11/2017	13:11	100	16.87	12.55	0.766	3.77	5.98	7.93	33.4
		13:16	100	16.87	12.49	0.764	3.23	5.89	7.90	32.9
		13:21	100	16.87	12.39	0.768	2.96	5.84	7.88	32.7
MW37-12	4/12/2017	10:59	120	19.96	13.45	0.892	2.99	4.35	7.70	38.3
		11:04	120	19.96	13.55	0.889	2.84	4.19	7.67	40.6
		11:09	120	19.96	13.64	0.889	2.64	4.12	7.66	39.4
MW38-12	4/12/2017	11:46	120	20.30	13.85	1.426	1.70	3.42	7.21	-17.6
		11:51	120	20.30	13.87	1.426	1.71	3.53	7.22	-14.0
		11:56	120	20.30	14.01	1.425	1.64	3.69	7.23	-20.5

Table 2

**Groundwater Quality Parameters
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017**

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/per min.)	Water Level (ft. BTOR)	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mv)
MW40-12	4/11/2017	14:32	100	21.55	12.16	1.182	1.84	1.13	7.73	25.6
		14:37	100	21.55	12.15	1.178	1.58	1.13	7.72	25.3
		14:42	100	21.55	12.00	1.178	1.53	1.10	7.71	25.1
MW41-12	4/11/2017	15:26	100	18.21	11.54	1.414	5.09	6.89	6.71	31.2
		15:31	100	18.21	11.55	1.411	4.78	6.88	6.70	30.5
		15:36	100	18.21	11.53	1.406	4.35	6.88	6.70	29.5
MW42-12	4/12/2017	10:28	140	21.28	11.75	1.059	2.00	7.90	7.25	43.0
		10:33	140	21.28	11.76	1.056	2.11	7.82	7.21	42.2
		10:38	140	21.28	11.80	1.056	2.01	7.79	7.19	41.7
MW43-12	4/12/2017	12:23	120	15.35	12.46	1.503	1.98	1.30	7.14	31.4
		12:28	120	15.35	12.47	1.499	1.87	1.21	7.11	31.9
		12:33	120	15.35	12.47	1.496	1.84	1.19	7.10	11.1
MW44-12	4/13/2017	13:35	120	17.14	11.27	0.748	8.02	4.32	7.76	-102.6
		13:40	120	17.14	11.23	0.746	7.77	4.60	7.76	-104.6
		13:45	120	17.14	11.25	0.744	7.52	4.54	7.77	-103.3
MW45-12	4/13/2017	14:16	100	16.66	11.06	1.482	5.14	2.59	7.02	2.8
		14:21	100	16.66	11.18	1.483	4.70	2.47	7.03	3.8
		14:26	100	16.66	11.21	1.482	4.38	2.42	7.03	5.6
MW46-12	4/13/2017	14:51	120	19.47	10.96	1.218	4.83	6.05	7.12	10.7
		14:56	120	19.47	10.96	1.224	4.01	5.94	7.09	11.1
		15:01	120	19.47	11.00	1.222	3.10	6.20	7.08	11.6
MW48-13	4/7/2017	10:31	110	12.44	11.41	2.525	2.18	0.87	6.99	2.7
		10:36	110	12.44	11.36	2.527	2.11	0.83	7.01	2.6
		10:41	110	12.44	11.34	2.530	1.71	0.82	7.06	2.4

Table 2

**Groundwater Quality Parameters
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017**

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/per min.)	Water Level (ft. BTOR)	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mv)
MW49-13	4/12/2017	14:10	130	13.78	14.14	1.307	3.38	3.37	7.12	36.0
		14:15	130	13.78	14.04	1.303	3.15	3.20	7.11	35.9
		14:20	130	13.78	14.13	1.301	2.76	3.15	7.11	35.6
MW50-12	4/13/2017	12:15	100	17.19	11.67	1.660	3.99	3.01	7.20	16.7
		12:20	100	17.19	11.65	1.659	3.80	2.84	7.18	16.2
		12:25	100	17.19	11.71	1.661	3.73	2.75	7.18	16.0
MW51-12	4/13/2017	13:35	120	14.14	11.27	0.748	8.02	4.32	7.76	-102.6
		13:40	120	17.14	11.23	0.746	7.77	4.60	7.76	-104.6
		13:45	120	17.14	11.25	0.744	7.52	4.54	7.77	-103.3
MW52-12	4/13/2017	11:08	110	15.93	11.67	1.451	5.26	0.53	6.91	-47.2
		11:13	110	15.93	11.64	1.454	5.03	0.51	6.92	-49.1
		11:18	110	15.93	11.59	1.460	4.91	0.50	6.93	-52.4
MW58-13	4/7/2017	15:50	110	14.55	13.00	0.918	3.04	6.03	6.98	13.6
		15:55	110	14.55	13.01	0.919	2.99	5.89	6.96	13.4
		16:00	110	14.55	12.95	0.919	2.83	5.77	6.94	13.3
MW59-14	4/5/2017	13:05	140	10.70	11.94	1.493	5.94	0.25	7.22	-0.4
		13:10	140	10.70	11.96	1.491	5.15	0.25	7.21	-0.5
		13:15	140	10.70	11.97	1.488	4.73	0.25	7.21	-1.1
MW60-14	4/11/2017	16:59	100	18.50	11.46	1.120	2.37	6.47	7.73	31.3
		17:04	100	18.50	11.38	1.117	2.24	6.15	7.72	31.3
		17:09	100	18.50	11.29	1.117	2.14	6.22	7.72	31.5

Notes:

ft. BTOR - feet below top of riser

DO - dissolved oxygen

ORP - oxidation-reduction potential

**Groundwater Elevation Data
Semi-Annual Groundwater Monitoring Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017**

Location	LNAPL Thickness (ft.)	Groundwater Elevation ⁽²⁾	Depth Below Top of Riser (ft.)
85-1		659.75	15.28
85-2		658.56	13.07
85-6	(1)	661.17	18.42
86-3		658.01	17.79
87-8		658.09	18.69
87-9		657.91	15.22
88-2		654.43	11.37
88-3		653.72	10.64
88-4		652.90	8.30
87-10		656.20	11.56
87-13		653.26	10.31
MW1-03		664.21	14.47
MW2-03		662.95	17.65
MW4-03		657.03	22.09
MW5-03		656.21	19.61
MW6-03		653.67	11.72
MW7-03		658.23	16.56
MW8-04		655.07	19.25
MW9-04		656.69	21.60
MW10-04		657.34	8.95
MW11D-04		657.32	5.95
MW11S-05		657.18	6.40
MW13-04		-	-
MW15-04		658.61	13.08
MW17-06		657.94	6.77
MW28-12		662.88	13.66
MW29-12		663.85	11.84
MW30-12		663.96	12.70
MW31-12		662.03	13.39
MW32-12		661.36	14.41
MW33-12		660.69	18.02
MW34-12		659.61	14.97
MW35-12		659.66	17.40
MW36-12		660.27	19.72
MW37-12		659.82	20.48
MW38-12		659.69	20.82
MW39-12		659.42	19.76
MW40-12		659.26	22.00
MW41-12		659.17	18.70
MW42-12		659.10	21.84
MW43-12		659.69	16.03
MW44-12	(3)	661.45	18.04
MW45-12	(1)	661.18	17.65
MW46-12	(1)	660.00	20.25
MW48-13		658.40	12.70
MW49-13		664.26	14.52
MW50-12	(1)	662.12	17.99
MW51-12	(1)	662.18	18.26
MW52-12	(1)	662.98	16.71
MW53-12		663.90	13.34
MW57-13		664.07	13.41
MW58-13		660.49	14.74
MW59-14		655.16	11.39
MW60-14		658.70	18.93
PWDISCH		658.05	19.74

Notes:

⁽¹⁾ No measurable LNAPL or sheen was identified in the wells.

⁽²⁾ Groundwater elevations measured in feet above mean sea level.

⁽³⁾ Sheen Detected. Sheen if thickness less than 0.01 ft.

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	87-10	87-13	MW59-14	MW59-14	MW6-03	87-8	MW10-04
Sample Identification:	WG-017360-040517-MR-008	WG-017360-040517-MR-005	WG-017360-040517-MR-006	WG-017360-040517-MR-007	WG-017360-040517-MR-004	WG-017360-040617-MR-015	WG-017360-040617-MR-012
Sample Date:	4/5/2017	4/5/2017	4/5/2017	4/5/2017	4/5/2017	4/6/2017	4/6/2017
Sample Type:				Duplicate			
Segment Depth	(29-32) ft BGS	(40-43) ft BGS	(30-35) ft BGS	(30-35) ft BGS	(13-18) ft BGS	(19.7-22.7) ft BGS	(33-38) ft BGS
Units							
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽³⁾	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone ⁽⁴⁾	ug/L	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽⁵⁾	ug/L	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	ug/L	50 U	50 U	2.7 J	50 U	3.2 J	50 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	33	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	14	1.0 U	1.0 U	1.1
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.9	2.1	1.0 U	3.4
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	ug/L	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	87-10	87-13	MW59-14	MW59-14	MW6-03	87-8	MW10-04
Sample Identification:	WG-017360-040517-MR-008	WG-017360-040517-MR-005	WG-017360-040517-MR-006	WG-017360-040517-MR-007	WG-017360-040517-MR-004	WG-017360-040617-MR-015	WG-017360-040617-MR-012
Sample Date:	4/5/2017	4/5/2017	4/5/2017	4/5/2017	4/5/2017	4/6/2017	4/6/2017
Sample Type:				Duplicate			
Segment Depth	(29-32) ft BGS	(40-43) ft BGS	(30-35) ft BGS	(30-35) ft BGS	(13-18) ft BGS	(19.7-22.7) ft BGS	(33-38) ft BGS
Semi-Volatile Organic Compounds (SVOCs) (cont'd)							
2-Methylphenol	ug/L	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--
Caprolactam	ug/L	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--
Metals							
Antimony	ug/L	--	--	2 U	2 U	--	--
Arsenic	ug/L	--	--	8.7	8.4	--	--
Barium	ug/L	--	--	75 J	72 J	--	--
Beryllium	ug/L	--	--	1 U	1 U	--	--
Cadmium	ug/L	--	--	0.066 J	1 U	--	--
Chromium	ug/L	--	--	10 U	10 U	--	--
Cobalt	ug/L	--	--	0.83 J	0.82 J	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	87-10	87-13	MW59-14	MW59-14	MW6-03	87-8	MW10-04
Sample Identification:	WG-017360-040517-MR-008	WG-017360-040517-MR-005	WG-017360-040517-MR-006	WG-017360-040517-MR-007	WG-017360-040517-MR-004	WG-017360-040617-MR-015	WG-017360-040617-MR-012
Sample Date:	4/5/2017	4/5/2017	4/5/2017	4/5/2017	4/5/2017	4/6/2017	4/6/2017
Sample Type:				Duplicate			
Segment Depth	(29-32) ft BGS	(40-43) ft BGS	(30-35) ft BGS	(30-35) ft BGS	(13-18) ft BGS	(19.7-22.7) ft BGS	(33-38) ft BGS
Metals (cont'd)							
Copper	ug/L	--	--	1.7 J	1.3 J	--	--
Iron	ug/L	--	--	450 ^{ab}	420 ^{ab}	--	--
Lead	ug/L	--	--	0.73 J	0.69 J	--	--
Manganese	ug/L	--	--	30 J	29 J	--	--
Mercury	ug/L	--	--	0.2 U	0.2 U	--	--
Molybdenum	ug/L	--	--	0.41 J	0.46 J	--	--
Nickel	ug/L	--	--	5.5 J	5.2 J	--	--
Selenium	ug/L	--	--	5 U	5 U	--	--
Silver	ug/L	--	--	0.2 U	0.2 U	--	--
Thallium	ug/L	--	--	2 U	2 U	--	--
Vanadium	ug/L	--	--	4 U	4 U	--	--
Zinc	ug/L	--	--	9.7 J	6.1 J	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	MW11D-04	MW11S-05	MW4-03	MW8-04	MW9-04	86-3	MW17-06
Sample Identification:	WG-017360-040617-MR-014	WG-017360-040617-MR-013	WG-017360-040617-MR-011	WG-017360-040617-MR-010	WG-017360-040617-MR-009	WG-017360-040717-MR-020	WG-017360-040717-MR-017
Sample Date:	4/6/2017	4/6/2017	4/6/2017	4/6/2017	4/6/2017	4/7/2017	4/7/2017
Sample Type:							
Segment Depth	(40-45) ft BGS	(5-10) ft BGS	(52-57) ft BGS	(30-35) ft BGS	(43-48) ft BGS	(41.5-46.5) ft BGS	(51-56) ft BGS
	Units						
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽³⁾	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone ⁽⁴⁾	ug/L	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽⁵⁾	ug/L	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	ug/L	50 U	50 U	50 U	50 U	6.0 J	50 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	4.2	3.6	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	67
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	92 ^{abc}
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.8	5.7 ^{ab}
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	ug/L	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	MW11D-04	MW11S-05	MW4-03	MW8-04	MW9-04	86-3	MW17-06
Sample Identification:	WG-017360-040617-MR-014	WG-017360-040617-MR-013	WG-017360-040617-MR-011	WG-017360-040617-MR-010	WG-017360-040617-MR-009	WG-017360-040717-MR-020	WG-017360-040717-MR-017
Sample Date:	4/6/2017	4/6/2017	4/6/2017	4/6/2017	4/6/2017	4/7/2017	4/7/2017
Sample Type:							
Segment Depth	(40-45) ft BGS	(5-10) ft BGS	(52-57) ft BGS	(30-35) ft BGS	(43-48) ft BGS	(41.5-46.5) ft BGS	(51-56) ft BGS
Semi-Volatile Organic Compounds (SVOCs) (cont'd)							
2-Methylphenol	ug/L	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--
Caprolactam	ug/L	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--
Metals							
Antimony	ug/L	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:		MW11D-04	MW11S-05	MW4-03	MW8-04	MW9-04	86-3	MW17-06
Sample Identification:		WG-017360-040617-MR-014	WG-017360-040617-MR-013	WG-017360-040617-MR-011	WG-017360-040617-MR-010	WG-017360-040617-MR-009	WG-017360-040717-MR-020	WG-017360-040717-MR-017
Sample Date:		4/6/2017	4/6/2017	4/6/2017	4/6/2017	4/6/2017	4/7/2017	4/7/2017
Sample Type:								
Segment Depth		(40-45) ft BGS	(5-10) ft BGS	(52-57) ft BGS	(30-35) ft BGS	(43-48) ft BGS	(41.5-46.5) ft BGS	(51-56) ft BGS
Metals (cont'd)								
Copper	ug/L	--	--	--	--	--	--	--
Iron	ug/L	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--
Manganese	ug/L	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--
Nickel	ug/L	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--
Silver	ug/L	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--
Vanadium	ug/L	--	--	--	--	--	--	--
Zinc	ug/L	--	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location: Sample Identification: Sample Date: Sample Type: Segment Depth		MW28-12 WG-017360-040717-MR-021 4/7/2017	MW48-13 WG-017360-040717-MR-016 4/7/2017	MW58-13 WG-017360-040717-MR-022 4/7/2017	MW7-03 WG-017360-040717-MR-018 4/7/2017 Duplicate	MW7-03 WG-017360-040717-MR-019 4/7/2017	MW15-04 WG-017360-041117-MR-031 4/11/2017	MW30-12 WG-017360-041117-MR-023 4/11/2017
		(14-19) ft BGS	(46-51) ft BGS	(13.5-18.5) ft BGS	(36-41) ft BGS	(36-41) ft BGS	(25-30) ft BGS	(25-30) ft BGS
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽³⁾	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone ⁽⁴⁾	ug/L	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽⁵⁾	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	2.4 J
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.1	9.9
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	0.93 J	1.0 U	0.91 J	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	0.57 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.2	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	ug/L	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	MW28-12	MW48-13	MW58-13	MW7-03	MW7-03	MW15-04	MW30-12
Sample Identification:	WG-017360-040717-MR-021	WG-017360-040717-MR-016	WG-017360-040717-MR-022	WG-017360-040717-MR-018	WG-017360-040717-MR-019	WG-017360-041117-MR-031	WG-017360-041117-MR-023
Sample Date:	4/7/2017	4/7/2017	4/7/2017	4/7/2017	4/7/2017	4/11/2017	4/11/2017
Sample Type:				Duplicate			
Segment Depth	(14-19) ft BGS	(46-51) ft BGS	(13.5-18.5) ft BGS	(36-41) ft BGS	(36-41) ft BGS	(25-30) ft BGS	(25-30) ft BGS
Semi-Volatile Organic Compounds (SVOCs) (cont'd)							
2-Methylphenol	ug/L	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--
Caprolactam	ug/L	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--
Metals							
Antimony	ug/L	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:		MW28-12	MW48-13	MW58-13	MW7-03	MW7-03	MW15-04	MW30-12
Sample Identification:		WG-017360-040717-MR-021	WG-017360-040717-MR-016	WG-017360-040717-MR-022	WG-017360-040717-MR-018	WG-017360-040717-MR-019	WG-017360-041117-MR-031	WG-017360-041117-MR-023
Sample Date:		4/7/2017	4/7/2017	4/7/2017	4/7/2017	4/7/2017	4/11/2017	4/11/2017
Sample Type:					Duplicate			
Segment Depth		(14-19) ft BGS	(46-51) ft BGS	(13.5-18.5) ft BGS	(36-41) ft BGS	(36-41) ft BGS	(25-30) ft BGS	(25-30) ft BGS
Metals (cont'd)								
Copper	ug/L	--	--	--	--	--	--	--
Iron	ug/L	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--
Manganese	ug/L	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--
Nickel	ug/L	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--
Silver	ug/L	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--
Vanadium	ug/L	--	--	--	--	--	--	--
Zinc	ug/L	--	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location: Sample Identification: Sample Date: Sample Type: Segment Depth		MW32-12 WG-017360-041117-MR-024 4/11/2017	MW33-12 WG-017360-041117-MR-025 4/11/2017	MW33-12 WG-017360-041117-MR-026 4/11/2017 Duplicate	MW34-12 WG-017360-041117-MR-028 4/11/2017	MW35-12 WG-017360-041117-MR-027 4/11/2017	MW40-12 WG-017360-041117-MR-029 4/11/2017	MW41-12 WG-017360-041117-MR-030 4/11/2017	MW60-14 WG-017360-041117-MR-032 4/11/2017
		(13.9-23.9) ft BGS	(31-36) ft BGS	(31-36) ft BGS	(14.4-24.4) ft BGS	(24.6-29.6) ft BGS	(45-50) ft BGS	(18.3-28.3) ft BGS	(21-26) ft BGS
<i>Units</i>									
<i>Volatile Organic Compounds (VOCs)</i>									
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽³⁾	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone ⁽⁴⁾	ug/L	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽⁵⁾	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	ug/L	1.5 J	50 U	2.6 J	50 U	50 U	50 U	50 U	50 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	3.5	3.5	1.0 U	1.0 U	2.2	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.8	1.6	2.3	25 ^{ab}	4.1	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
<i>Semi-Volatile Organic Compounds (SVOCs)</i>									
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	ug/L	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location: Sample Identification: Sample Date: Sample Type: Segment Depth	MW32-12 WG-017360-041117-MR-024 4/11/2017	MW33-12 WG-017360-041117-MR-025 4/11/2017	MW33-12 WG-017360-041117-MR-026 4/11/2017 Duplicate	MW34-12 WG-017360-041117-MR-028 4/11/2017	MW35-12 WG-017360-041117-MR-027 4/11/2017	MW40-12 WG-017360-041117-MR-029 4/11/2017	MW41-12 WG-017360-041117-MR-030 4/11/2017	MW60-14 WG-017360-041117-MR-032 4/11/2017
<i>Semi-Volatile Organic Compounds (SVOCs) (cont'd)</i>	(13.9-23.9) ft BGS	(31-36) ft BGS	(31-36) ft BGS	(14.4-24.4) ft BGS	(24.6-29.6) ft BGS	(45-50) ft BGS	(18.3-28.3) ft BGS	(21-26) ft BGS
2-Methylphenol	ug/L	--	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--	--
Caprolactam	ug/L	--	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--	--
<i>Metals</i>								
Antimony	ug/L	--	--	--	--	--	--	2 U
Arsenic	ug/L	--	--	--	--	--	--	5 U
Barium	ug/L	--	--	--	--	--	--	16 J
Beryllium	ug/L	--	--	--	--	--	--	1 U
Cadmium	ug/L	--	--	--	--	--	--	1 U
Chromium	ug/L	--	--	--	--	--	--	5.1 J
Cobalt	ug/L	--	--	--	--	--	--	0.59 J

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:		MW32-12	MW33-12	MW33-12	MW34-12	MW35-12	MW40-12	MW41-12	MW60-14
Sample Identification:		WG-017360-041117-MR-024	WG-017360-041117-MR-025	WG-017360-041117-MR-026	WG-017360-041117-MR-028	WG-017360-041117-MR-027	WG-017360-041117-MR-029	WG-017360-041117-MR-030	WG-017360-041117-MR-032
Sample Date:		4/11/2017	4/11/2017	4/11/2017	4/11/2017	4/11/2017	4/11/2017	4/11/2017	4/11/2017
Sample Type:				Duplicate					
Segment Depth		(13.9-23.9) ft BGS	(31-36) ft BGS	(31-36) ft BGS	(14.4-24.4) ft BGS	(24.6-29.6) ft BGS	(45-50) ft BGS	(18.3-28.3) ft BGS	(21-26) ft BGS
Metals (cont'd)									
Copper	ug/L	--	--	--	--	--	--	--	1.6 J
Iron	ug/L	--	--	--	--	--	--	--	200 U
Lead	ug/L	--	--	--	--	--	--	--	3 U
Manganese	ug/L	--	--	--	--	--	--	--	3.6 J
Mercury	ug/L	--	--	--	--	--	--	--	0.2 U
Molybdenum	ug/L	--	--	--	--	--	--	--	4.5 J
Nickel	ug/L	--	--	--	--	--	--	--	0.76 J
Selenium	ug/L	--	--	--	--	--	--	--	1.2 J
Silver	ug/L	--	--	--	--	--	--	--	0.2 U
Thallium	ug/L	--	--	--	--	--	--	--	2 U
Vanadium	ug/L	--	--	--	--	--	--	--	4 U
Zinc	ug/L	--	--	--	--	--	--	--	3 J

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	MW60-14	85-6	85-6	MW2-03	MW37-12	MW38-12	MW42-12	MW43-12
Sample Identification:	WG-017360-041117-MR-033	WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-041217-MR-039	WG-017360-041217-MR-035	WG-017360-041217-MR-036	WG-017360-041217-MR-034	WG-017360-041217-MR-037
Sample Date:	4/11/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017
Sample Type:	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate
Segment Depth	(21-26) ft BGS	(19.5-24.5) ft BGS	(19.5-24.5) ft BGS	(22-27) ft BGS	(19.4-29.4) ft BGS	(20-30) ft BGS	(21-31) ft BGS	(15-25) ft BGS
Units								
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽³⁾	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone ⁽⁴⁾	ug/L	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽⁵⁾	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	ug/L	50 U	50 U	50 U	2.4 J	50 U	50 U	50 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	0.42 J	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	0.97 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	5.5 ^{ab}	4.6	1.0 U	1.0 U	1.0 U	2.6
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0	1.0 U	12 ^{ab}	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	3.2 ^{ab}	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,4-Dichlorophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,4-Dimethylphenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,4-Dinitrophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	5.7 U	5.0 U	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	5.7 U	5.0 U	--	--	--	--
2-Chloronaphthalene	ug/L	--	5.7 U	5.0 U	--	--	--	--
2-Chlorophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2-Methylnaphthalene	ug/L	--	5.7 U	5.0 U	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location: Sample Identification: Sample Date: Sample Type: Segment Depth <i>Semi-Volatile Organic Compounds (SVOCs) (cont'd)</i>	MW60-14 WG-017360-041117-MR-033 4/11/2017 Duplicate (21-26) ft BGS	85-6 WG-017360-041217-MR-040 4/12/2017 Duplicate (19.5-24.5) ft BGS	85-6 WG-017360-041217-MR-041 4/12/2017 Duplicate (19.5-24.5) ft BGS	MW2-03 WG-017360-041217-MR-039 4/12/2017 Duplicate (22-27) ft BGS	MW37-12 WG-017360-041217-MR-035 4/12/2017 Duplicate (19.4-29.4) ft BGS	MW38-12 WG-017360-041217-MR-036 4/12/2017 Duplicate (20-30) ft BGS	MW42-12 WG-017360-041217-MR-034 4/12/2017 Duplicate (21-31) ft BGS	MW43-12 WG-017360-041217-MR-037 4/12/2017 Duplicate (15-25) ft BGS
2-Methylphenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
2-Nitroaniline	ug/L	--	5.7 U	5.0 U	--	--	--	--
2-Nitrophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
3&4-Methylphenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	5.7 U	5.0 U	--	--	--	--
3-Nitroaniline	ug/L	--	5.7 U	5.0 U	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	5.7 U	5.0 U	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
4-Chloroaniline	ug/L	--	5.7 U	5.0 U	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	5.7 U	5.0 U	--	--	--	--
4-Nitroaniline	ug/L	--	5.7 U	5.0 U	--	--	--	--
4-Nitrophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
Acenaphthene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Acenaphthylene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Acetophenone	ug/L	--	1.1 U	1.0 U	--	--	--	--
Anthracene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Atrazine	ug/L	--	1.1 U	1.0 U	--	--	--	--
Benzaldehyde	ug/L	--	1.1 U	1.0 U	--	--	--	--
Benzo(a)anthracene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Benzo(a)pyrene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	5.7 U	5.0 U	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	5.7 U	5.0 U	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	5.7 U	5.0 U	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	5.7 U	5.0 U	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	5.7 U	5.0 U	--	--	--	--
Caprolactam	ug/L	--	11 U	10 U	--	--	--	--
Carbazole	ug/L	--	5.7 U	5.0 U	--	--	--	--
Chrysene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Dibenzofuran	ug/L	--	5.7 U	5.0 U	--	--	--	--
Diethyl phthalate	ug/L	--	5.7 U	5.0 U	--	--	--	--
Dimethyl phthalate	ug/L	--	5.7 U	5.0 U	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	5.7 U	5.0 U	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	5.7 U	5.0 U	--	--	--	--
Fluoranthene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Fluorene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Hexachlorobenzene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Hexachlorobutadiene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Hexachloroethane	ug/L	--	5.7 U	5.0 U	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Isophorone	ug/L	--	5.7 U	5.0 U	--	--	--	--
Naphthalene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Nitrobenzene	ug/L	--	5.7 U	5.0 U	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	5.7 U	5.0 U	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	5.7 U	5.0 U	--	--	--	--
Pentachlorophenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
Phenanthrene	ug/L	--	5.7 U	5.0 U	--	--	--	--
Phenol	ug/L	--	5.7 U	5.0 U	--	--	--	--
Pyrene	ug/L	--	5.7 U	5.0 U	--	--	--	--
<i>Metals</i>								
Antimony	ug/L	2 U	--	--	--	--	--	--
Arsenic	ug/L	5 U	--	--	--	--	--	--
Barium	ug/L	17 J	--	--	--	--	--	--
Beryllium	ug/L	1 U	--	--	--	--	--	--
Cadmium	ug/L	0.091 J	--	--	--	--	--	--
Chromium	ug/L	5 J	--	--	--	--	--	--
Cobalt	ug/L	0.6 J	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:		MW60-14	85-6	85-6	MW2-03	MW37-12	MW38-12	MW42-12	MW43-12
Sample Identification:		WG-017360-041117-MR-033	WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-041217-MR-039	WG-017360-041217-MR-035	WG-017360-041217-MR-036	WG-017360-041217-MR-034	WG-017360-041217-MR-037
Sample Date:		4/11/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017	4/12/2017
Sample Type:		Duplicate		Duplicate					
Segment Depth		(21-26) ft BGS	(19.5-24.5) ft BGS	(19.5-24.5) ft BGS	(22-27) ft BGS	(19.4-29.4) ft BGS	(20-30) ft BGS	(21-31) ft BGS	(15-25) ft BGS
Metals (cont'd)									
Copper	ug/L	1.8 J	--	--	--	--	--	--	--
Iron	ug/L	200 U	--	--	--	--	--	--	--
Lead	ug/L	3 U	--	--	--	--	--	--	--
Manganese	ug/L	3.4 J	--	--	--	--	--	--	--
Mercury	ug/L	0.2 U	--	--	--	--	--	--	--
Molybdenum	ug/L	4.6 J	--	--	--	--	--	--	--
Nickel	ug/L	0.73 J	--	--	--	--	--	--	--
Selenium	ug/L	1 J	--	--	--	--	--	--	--
Silver	ug/L	0.2 U	--	--	--	--	--	--	--
Thallium	ug/L	2 U	--	--	--	--	--	--	--
Vanadium	ug/L	4 U	--	--	--	--	--	--	--
Zinc	ug/L	4 J	--	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:	MW49-13	MW44-12	MW45-12	MW46-12	MW50-12	MW51-12	MW52-12
Sample Identification:	WG-017360-041217-MR-038	WG-017360-041317-MR-045	WG-017360-041317-MR-046	WG-017360-041317-MR-047	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:	4/12/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2017
Sample Type:							
Segment Depth	(34-39) ft BGS	(18.5-28.5) ft BGS	(19.1-29.1) ft BGS	(20.2-30.2) ft BGS	(17-27) ft BGS	(17-27) ft BGS	(16.7-26.7) ft BGS
	Units						
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽³⁾	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone ⁽⁴⁾	ug/L	25 U	2.8 J	25 U	25 U	25 U	25 U
2-Hexanone	ug/L	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽⁵⁾	ug/L	50 U	0.69 J	50 U	50 U	50 U	1.7 J
Acetone	ug/L	50 U	8.5 J	4.1 J	5.6 J	3.1 J	6.6 J
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	0.52 J	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	0.86 J	1.0 U	1.0 U	0.70 J	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	0.67 J	1.0 U	1.0 U	1.0 U	2.9
Isopropyl benzene	ug/L	5.0 U	1.6 J	5.0 U	5.0 U	5.0 U	2.1 J
Methyl acetate	ug/L	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	190 ^{abc}	1.0 U	1.3	1.0 U	3.1	1.3
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	3.0	1.0 U	0.52 J	1.0 U	0.81 J	0.44 J
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	2.4 J	3.0 U	3.0 U	3.0 U	4.4
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2,4,5-Trichlorophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2,4,6-Trichlorophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2,4-Dichlorophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2,4-Dimethylphenol	ug/L	--	2.8 J	5.4 U	5.0 U	5.0 U	5.4 U
2,4-Dinitrophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2,4-Dinitrotoluene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2,6-Dinitrotoluene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2-Chloronaphthalene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2-Chlorophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.4 U
2-Methylnaphthalene	ug/L	--	5.5 U	5.4 U	5.0 U	0.18 J	5.4 U

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location:		MW49-13	MW44-12	MW45-12	MW46-12	MW50-12	MW51-12	MW52-12
Sample Identification:		WG-017360-041217-MR-038	WG-017360-041317-MR-045	WG-017360-041317-MR-046	WG-017360-041317-MR-047	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:		4/12/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2017
Sample Type:								
Segment Depth		(34-39) ft BGS	(18.5-28.5) ft BGS	(19.1-29.1) ft BGS	(20.2-30.2) ft BGS	(17-27) ft BGS	(17-27) ft BGS	(16.7-26.7) ft BGS
Semi-Volatile Organic Compounds (SVOCs) (cont'd)								
2-Methylphenol	ug/L	--	0.88 J	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
2-Nitroaniline	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
2-Nitrophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
3&4-Methylphenol	ug/L	--	0.97 J	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
3,3'-Dichlorobenzidine	ug/L	--	5.5 U	R	5.0 U	5.0 U	5.0 U	5.4 U
3-Nitroaniline	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4,6-Dinitro-2-methylphenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4-Bromophenyl phenyl ether	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4-Chloro-3-methylphenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4-Chloroaniline	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4-Chlorophenyl phenyl ether	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4-Nitroaniline	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
4-Nitrophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Acenaphthene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.51 J	1.1 J
Acenaphthylene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Acetophenone	ug/L	--	1.1 U	1.1 U	1.0 U	1.0 U	1.0 U	1.1 U
Anthracene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.23 J	5.4 U
Atrazine	ug/L	--	1.1 U	1.1 U	1.0 U	1.0 U	1.0 U	1.1 U
Benzaldehyde	ug/L	--	1.1 U	1.1 U	1.0 U	1.0 U	1.0 U	1.1 U
Benzo(a)anthracene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Benzo(a)pyrene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Benzo(b)fluoranthene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Benzo(g,h,i)perylene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Benzo(k)fluoranthene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Biphenyl (1,1-Biphenyl)	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
bis(2-Chloroethoxy)methane	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
bis(2-Chloroethyl)ether	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Butyl benzylphthalate (BBP)	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Caprolactam	ug/L	--	11 U	11 U	10 U	10 U	10 U	11 U
Carbazole	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.65 J	2.9 J
Chrysene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Dibenz(a,h)anthracene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Dibenzofuran	ug/L	--	5.5 U	5.4 U	5.0 U	0.59 J	0.86 J	5.4 U
Diethyl phthalate	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Dimethyl phthalate	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Di-n-butylphthalate (DBP)	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Di-n-octyl phthalate (DnOP)	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Fluoranthene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.42 J	5.4 U
Fluorene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.40 J	3.2 J
Hexachlorobenzene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Hexachlorobutadiene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Hexachlorocyclopentadiene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Hexachloroethane	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Indeno(1,2,3-cd)pyrene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Isophorone	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Naphthalene	ug/L	--	0.65 J	5.4 U	5.0 U	5.0 U	0.36 J	2.3 J
Nitrobenzene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
N-Nitrosodi-n-propylamine	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
N-Nitrosodiphenylamine	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Pentachlorophenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Phenanthrene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.61 J	5.4 U
Phenol	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	5.0 U	5.4 U
Pyrene	ug/L	--	5.5 U	5.4 U	5.0 U	5.0 U	0.23 J	5.4 U
Metals								
Antimony	ug/L	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--

Table 4
Groundwater Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Sample Location: Sample Identification: Sample Date: Sample Type: Segment Depth Metals (cont'd)	MW49-13 WG-017360-041217-MR-038 4/12/2017 (34-39) ft BGS	MW44-12 WG-017360-041317-MR-045 4/13/2017 (18.5-28.5) ft BGS	MW45-12 WG-017360-041317-MR-046 4/13/2017 (19.1-29.1) ft BGS	MW46-12 WG-017360-041317-MR-047 4/13/2017 (20.2-30.2) ft BGS	MW50-12 WG-017360-041317-MR-044 4/13/2017 (17-27) ft BGS	MW51-12 WG-017360-041317-MR-043 4/13/2017 (17-27) ft BGS	MW52-12 WG-017360-041317-MR-042 4/13/2017 (16.7-26.7) ft BGS
Copper	ug/L	--	--	--	--	--	--
Iron	ug/L	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--
Manganese	ug/L	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--
Nickel	ug/L	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--
Silver	ug/L	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--
Vanadium	ug/L	--	--	--	--	--	--
Zinc	ug/L	--	--	--	--	--	--

Notes:

- ⁽¹⁾ Cleanup Criteria Requirements for Response Activity, Administrative Rules R299.1 to R299.50 effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended.
- ⁽²⁾ Carbonate Hardness of 344 mg/L was used to calculate Groundwater Surface Water Interface Criteria.
- ⁽³⁾ 1,2-Dibromoethane also known as ethylene dibromide
- ⁽⁴⁾ 2-butanone also known as methyl ethyl ketone (MEK)
- ⁽⁵⁾ 4-methyl-2-pentanone also known as methyl isobutyl ketone (MIBK)
- ⁽⁶⁾ 2,2'-oxybis(1-chloropropane) also known as bis(2-chloroisopropyl) ether
- U - Not detected at the associated reporting limit.
- J - Estimated concentration.
- UJ - Not detected; associated reporting limit is estimated.
- R - Rejected.
- Parameter was not analyzed.
- ID - Insufficient data to develop criterion.
- NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
- NLL - Hazardous substance is not likely to leach under most soil conditions.
- NLV - Hazardous substance is not likely to volatilize under most conditions.
- Exceeds Generic Cleanup Criteria. Superscript letter notes the criterion exceeded.

Surface Water Sample Analytical Results
Semi-Annual Groundwater Event
Former Grand Rapids Metal Plant
Wyoming, Michigan
Spring 2017

Sample Location:	C-1	C-2	C-3
Sample Identification:	SW-017360-040517-MR-001	SW-017360-040517-MR-002	SW-017360-040517-MR-003
Sample Date:	04/05/2017	04/05/2017	04/05/2017

	Units			
Volatile Organic Compounds (VOCs)				
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane ⁽¹⁾	ug/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U
2-Butanone ⁽²⁾	ug/L	3.3 J	3.3 J	3.6 J
2-Hexanone	ug/L	50 U	50 U	50 U
4-Methyl-2-pentanone ⁽³⁾	ug/L	50 U	50 U	50 U
Acetone	ug/L	11 J	14 J	23 J
Benzene	ug/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	10 U	10 U	10 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.0 U	3.0 U	3.0 U

Notes:

⁽¹⁾ 1,2-Dibromoethane also known as ethylene dibromide⁽²⁾ 2-butanone also known as methyl ethyl ketone (MEK)⁽³⁾ 4-methyl-2-pentanone also known as methyl isobutyl ketone (MIBK)

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

Attachments

Attachment A

Analytical Laboratory Reports



18-Apr-2017

Jennifer Quigley
GHD Services Inc.
14496 Sheldon Road
Suite 200
Plymouth, MI 48170

Re: **Former GRMP (017360)**

Work Order: **1704435**

Dear Jennifer,

ALS Environmental received 23 samples on 08-Apr-2017 for the analyses presented in the following report.

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

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

The total number of pages in this report is 76.

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

Sincerely,

A handwritten signature in black ink that reads "Alex Csaszar".

Electronically approved by: Alex Csaszar

Alex Csaszar
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: GHD Services Inc.
Project: Former GRMP (017360)
Work Order: 1704435

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1704435-01	SW-017360-040517-MR-001	Water		4/5/2017 10:30	4/8/2017 10:15	☐
1704435-02	SW-017360-040517-MR-002	Water		4/5/2017 10:35	4/8/2017 10:15	☐
1704435-03	SW-017360-040517-MR-003	Water		4/5/2017 10:40	4/8/2017 10:15	☐
1704435-04	WG-017360-040517-MR-004	Water		4/5/2017 11:30	4/8/2017 10:15	☐
1704435-05	WG-017360-040517-MR-005	Water		4/5/2017 11:50	4/8/2017 10:15	☐
1704435-06	WG-017360-040517-MR-006	Water		4/5/2017 13:15	4/8/2017 10:15	☐
1704435-07	WG-017360-040517-MR-007	Water		4/5/2017 13:30	4/8/2017 10:15	☐
1704435-08	WG-017360-040517-MR-008	Water		4/5/2017 14:15	4/8/2017 10:15	☐
1704435-09	WG-017360-040617-MR-009	Water		4/6/2017 11:11	4/8/2017 10:15	☐
1704435-10	WG-017360-040617-MR-010	Water		4/6/2017 10:36	4/8/2017 10:15	☐
1704435-11	WG-017360-040617-MR-011	Water		4/6/2017 11:58	4/8/2017 10:15	☐
1704435-12	WG-017360-040617-MR-012	Water		4/6/2017 12:51	4/8/2017 10:15	☐
1704435-13	WG-017360-040617-MR-013	Water		4/6/2017 14:20	4/8/2017 10:15	☐
1704435-14	WG-017360-040617-MR-014	Water		4/6/2017 14:37	4/8/2017 10:15	☐
1704435-15	WG-017360-040617-MR-015	Water		4/6/2017 16:43	4/8/2017 10:15	☐
1704435-16	WG-017360-040717-MR-016	Water		4/7/2017 10:41	4/8/2017 10:15	☐
1704435-17	WG-017360-040717-MR-017	Water		4/7/2017 11:27	4/8/2017 10:15	☐
1704435-18	WG-017360-040717-MR-018	Water		4/7/2017 12:56	4/8/2017 10:15	☐
1704435-19	WG-017360-040717-MR-019	Water		4/7/2017 13:15	4/8/2017 10:15	☐
1704435-20	WG-017360-040717-MR-020	Water		4/7/2017 13:20	4/8/2017 10:15	☐
1704435-21	WG-017360-040717-MR-021	Water		4/7/2017 15:20	4/8/2017 10:15	☐
1704435-22	WG-017360-040717-MR-022	Water		4/7/2017 16:00	4/8/2017 10:15	☐
1704435-23	Trip Blank-1	Water		4/7/2017	4/8/2017 10:15	☐

Client: GHD Services Inc.
Project: Former GRMP (017360)
Work Order: 1704435

Case Narrative

Samples for the above noted Work Order were received on 04/08/2017. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

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

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

Volatile Organics:

Batch R209705, Method VOC_8260_W, Sample VLCSW2-R209705: The LCS recovery was above the upper control limits for Acetone. The sample results for this analyte may be biased high.

Metals:

No other deviations or anomalies were noted.

Client: GHD Services Inc.
Project: Former GRMP (017360)
WorkOrder: 1704435

QUALIFIERS, ACRONYMS, UNITS

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

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

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: SW-017360-040517-MR-001
Collection Date: 4/5/2017 10:30 AM

Work Order: 1704435
Lab ID: 1704435-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 05:05
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 05:05
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 05:05
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 05:05
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 05:05
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 05:05
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 05:05
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 05:05
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 05:05
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 05:05
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 05:05
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 05:05
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 05:05
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 05:05
2-Butanone	3.3	J	0.58	25	µg/L	1	4/14/2017 05:05
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 05:05
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 05:05
Acetone	11	J	0.92	50	µg/L	1	4/14/2017 05:05
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 05:05
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 05:05
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 05:05
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 05:05
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 05:05
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 05:05
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 05:05
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 05:05
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 05:05
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 05:05
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 05:05
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 05:05
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 05:05
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 05:05
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 05:05
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 05:05
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 05:05
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 05:05
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 05:05
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 05:05

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: SW-017360-040517-MR-001
Collection Date: 4/5/2017 10:30 AM

Work Order: 1704435
Lab ID: 1704435-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 05:05
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 05:05
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 05:05
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 05:05
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 05:05
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 05:05
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 05:05
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 05:05
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 05:05
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 05:05
Surr: 1,2-Dichloroethane-d4	103			75-120	%REC	1	4/14/2017 05:05
Surr: 4-Bromofluorobenzene	82.4			80-110	%REC	1	4/14/2017 05:05
Surr: Dibromofluoromethane	95.8			85-115	%REC	1	4/14/2017 05:05
Surr: Toluene-d8	97.0			85-110	%REC	1	4/14/2017 05:05

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: SW-017360-040517-MR-002
Collection Date: 4/5/2017 10:35 AM

Work Order: 1704435
Lab ID: 1704435-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 05:29
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 05:29
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 05:29
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 05:29
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 05:29
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 05:29
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 05:29
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 05:29
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 05:29
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 05:29
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 05:29
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 05:29
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 05:29
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 05:29
2-Butanone	3.3	J	0.58	25	µg/L	1	4/14/2017 05:29
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 05:29
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 05:29
Acetone	14	J	0.92	50	µg/L	1	4/14/2017 05:29
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 05:29
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 05:29
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 05:29
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 05:29
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 05:29
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 05:29
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 05:29
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 05:29
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 05:29
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 05:29
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 05:29
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 05:29
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 05:29
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 05:29
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 05:29
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 05:29
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 05:29
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 05:29
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 05:29
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 05:29

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: SW-017360-040517-MR-002
Collection Date: 4/5/2017 10:35 AM

Work Order: 1704435
Lab ID: 1704435-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 05:29
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 05:29
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 05:29
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 05:29
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 05:29
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 05:29
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 05:29
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 05:29
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 05:29
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 05:29
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/14/2017 05:29
Surr: 4-Bromofluorobenzene	85.1			80-110	%REC	1	4/14/2017 05:29
Surr: Dibromofluoromethane	95.6			85-115	%REC	1	4/14/2017 05:29
Surr: Toluene-d8	97.8			85-110	%REC	1	4/14/2017 05:29

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: SW-017360-040517-MR-003
Collection Date: 4/5/2017 10:40 AM

Work Order: 1704435
Lab ID: 1704435-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 05:54
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 05:54
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 05:54
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 05:54
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 05:54
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 05:54
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 05:54
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 05:54
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 05:54
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 05:54
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 05:54
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 05:54
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 05:54
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 05:54
2-Butanone	3.6	J	0.58	25	µg/L	1	4/14/2017 05:54
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 05:54
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 05:54
Acetone	23	J	0.92	50	µg/L	1	4/14/2017 05:54
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 05:54
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 05:54
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 05:54
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 05:54
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 05:54
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 05:54
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 05:54
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 05:54
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 05:54
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 05:54
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 05:54
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 05:54
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 05:54
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 05:54
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 05:54
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 05:54
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 05:54
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 05:54
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 05:54
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 05:54

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: SW-017360-040517-MR-003
Collection Date: 4/5/2017 10:40 AM

Work Order: 1704435
Lab ID: 1704435-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 05:54
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 05:54
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 05:54
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 05:54
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 05:54
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 05:54
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 05:54
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 05:54
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 05:54
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 05:54
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/14/2017 05:54
Surr: 4-Bromofluorobenzene	87.6			80-110	%REC	1	4/14/2017 05:54
Surr: Dibromofluoromethane	95.2			85-115	%REC	1	4/14/2017 05:54
Surr: Toluene-d8	99.6			85-110	%REC	1	4/14/2017 05:54

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-004
Collection Date: 4/5/2017 11:30 AM

Work Order: 1704435
Lab ID: 1704435-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 06:19
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 06:19
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 06:19
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 06:19
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 06:19
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 06:19
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 06:19
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 06:19
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 06:19
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 06:19
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 06:19
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 06:19
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 06:19
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 06:19
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 06:19
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 06:19
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 06:19
Acetone	3.2	J	0.92	50	µg/L	1	4/14/2017 06:19
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 06:19
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 06:19
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 06:19
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 06:19
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 06:19
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 06:19
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 06:19
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 06:19
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 06:19
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 06:19
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 06:19
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 06:19
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 06:19
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 06:19
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 06:19
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 06:19
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 06:19
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 06:19
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 06:19
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 06:19

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-004
Collection Date: 4/5/2017 11:30 AM

Work Order: 1704435
Lab ID: 1704435-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 06:19
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 06:19
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 06:19
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 06:19
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 06:19
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 06:19
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 06:19
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 06:19
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 06:19
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 06:19
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	1	4/14/2017 06:19
Surr: 4-Bromofluorobenzene	84.6			80-110	%REC	1	4/14/2017 06:19
Surr: Dibromofluoromethane	93.9			85-115	%REC	1	4/14/2017 06:19
Surr: Toluene-d8	97.3			85-110	%REC	1	4/14/2017 06:19

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-005
Collection Date: 4/5/2017 11:50 AM

Work Order: 1704435
Lab ID: 1704435-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 06:44
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 06:44
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 06:44
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 06:44
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 06:44
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 06:44
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 06:44
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 06:44
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 06:44
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 06:44
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 06:44
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 06:44
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 06:44
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 06:44
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 06:44
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 06:44
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 06:44
Acetone	U		0.92	50	µg/L	1	4/14/2017 06:44
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 06:44
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 06:44
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 06:44
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 06:44
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 06:44
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 06:44
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 06:44
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 06:44
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 06:44
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 06:44
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 06:44
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 06:44
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 06:44
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 06:44
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 06:44
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 06:44
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 06:44
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 06:44
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 06:44
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 06:44

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-005
Collection Date: 4/5/2017 11:50 AM

Work Order: 1704435
Lab ID: 1704435-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 06:44
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 06:44
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 06:44
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 06:44
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 06:44
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 06:44
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 06:44
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 06:44
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 06:44
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 06:44
Surr: 1,2-Dichloroethane-d4	99.5			75-120	%REC	1	4/14/2017 06:44
Surr: 4-Bromofluorobenzene	83.0			80-110	%REC	1	4/14/2017 06:44
Surr: Dibromofluoromethane	96.8			85-115	%REC	1	4/14/2017 06:44
Surr: Toluene-d8	96.9			85-110	%REC	1	4/14/2017 06:44

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-006
Collection Date: 4/5/2017 01:15 PM

Work Order: 1704435
Lab ID: 1704435-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			Method: SW7470A			Prep: SW7470 / 4/12/17	Analyst: JJB
Mercury	U		0.000019	0.00020	mg/L	1	4/12/2017 16:45
METALS BY ICP-MS							
			Method: SW6020A			Prep: SW3005A / 4/13/17	Analyst: RH
Antimony	U		0.00017	0.0020	mg/L	1	4/14/2017 04:15
Arsenic	0.0087		0.00087	0.0050	mg/L	1	4/14/2017 04:15
Barium	0.075	J	0.0022	0.10	mg/L	1	4/14/2017 04:15
Beryllium	U		0.00012	0.0010	mg/L	1	4/14/2017 04:15
Cadmium	0.000066	J	0.000050	0.0010	mg/L	1	4/14/2017 04:15
Chromium	U		0.00065	0.010	mg/L	1	4/14/2017 04:15
Cobalt	0.00083	J	0.00014	0.020	mg/L	1	4/14/2017 04:15
Copper	0.0017	J	0.00028	0.0040	mg/L	1	4/14/2017 04:15
Iron	0.45		0.0046	0.20	mg/L	1	4/14/2017 04:15
Lead	0.00073	J	0.00033	0.0030	mg/L	1	4/14/2017 04:15
Manganese	0.030	J	0.00051	0.050	mg/L	1	4/14/2017 04:15
Molybdenum	0.00041	J	0.00031	0.050	mg/L	1	4/14/2017 04:15
Nickel	0.0055	J	0.00041	0.020	mg/L	1	4/14/2017 04:15
Selenium	U		0.00090	0.0050	mg/L	1	4/14/2017 04:15
Silver	U		0.000050	0.00020	mg/L	1	4/14/2017 04:15
Thallium	U		0.00016	0.0020	mg/L	1	4/14/2017 04:15
Vanadium	U		0.00098	0.0040	mg/L	1	4/14/2017 04:15
Zinc	0.0097	J	0.0014	0.050	mg/L	1	4/14/2017 04:15
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: AK
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 07:09
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 07:09
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 07:09
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 07:09
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 07:09
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 07:09
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 07:09
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 07:09
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 07:09
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 07:09
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 07:09
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 07:09
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 07:09
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 07:09
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 07:09
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 07:09

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-006
Collection Date: 4/5/2017 01:15 PM

Work Order: 1704435
Lab ID: 1704435-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 07:09
Acetone	2.7	J	0.92	50	µg/L	1	4/14/2017 07:09
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 07:09
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 07:09
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 07:09
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 07:09
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 07:09
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 07:09
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 07:09
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 07:09
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 07:09
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 07:09
cis-1,2-Dichloroethene	14		0.25	1.0	µg/L	1	4/14/2017 07:09
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 07:09
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 07:09
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 07:09
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 07:09
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 07:09
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 07:09
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 07:09
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 07:09
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 07:09
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 07:09
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 07:09
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 07:09
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 07:09
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 07:09
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 07:09
Trichloroethene	1.9		0.30	1.0	µg/L	1	4/14/2017 07:09
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 07:09
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 07:09
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 07:09
Surr: 1,2-Dichloroethane-d4	98.8			75-120	%REC	1	4/14/2017 07:09
Surr: 4-Bromofluorobenzene	84.5			80-110	%REC	1	4/14/2017 07:09
Surr: Dibromofluoromethane	93.7			85-115	%REC	1	4/14/2017 07:09
Surr: Toluene-d8	97.4			85-110	%REC	1	4/14/2017 07:09

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-007
Collection Date: 4/5/2017 01:30 PM

Work Order: 1704435
Lab ID: 1704435-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			Method: SW7470A			Prep: SW7470 / 4/12/17	Analyst: JJB
Mercury	U		0.000019	0.00020	mg/L	1	4/12/2017 16:48
METALS BY ICP-MS							
			Method: SW6020A			Prep: SW3005A / 4/13/17	Analyst: RH
Antimony	U		0.00017	0.0020	mg/L	1	4/14/2017 04:36
Arsenic	0.0084		0.00087	0.0050	mg/L	1	4/14/2017 04:36
Barium	0.072	J	0.0022	0.10	mg/L	1	4/14/2017 04:36
Beryllium	U		0.00012	0.0010	mg/L	1	4/14/2017 04:36
Cadmium	U		0.000050	0.0010	mg/L	1	4/14/2017 04:36
Chromium	U		0.00065	0.010	mg/L	1	4/14/2017 04:36
Cobalt	0.00082	J	0.00014	0.020	mg/L	1	4/14/2017 04:36
Copper	0.0013	J	0.00028	0.0040	mg/L	1	4/14/2017 04:36
Iron	0.42		0.0046	0.20	mg/L	1	4/14/2017 04:36
Lead	0.00069	J	0.00033	0.0030	mg/L	1	4/14/2017 04:36
Manganese	0.029	J	0.00051	0.050	mg/L	1	4/14/2017 04:36
Molybdenum	0.00046	J	0.00031	0.050	mg/L	1	4/14/2017 04:36
Nickel	0.0052	J	0.00041	0.020	mg/L	1	4/14/2017 04:36
Selenium	U		0.00090	0.0050	mg/L	1	4/14/2017 04:36
Silver	U		0.000050	0.00020	mg/L	1	4/14/2017 04:36
Thallium	U		0.00016	0.0020	mg/L	1	4/14/2017 04:36
Vanadium	U		0.00098	0.0040	mg/L	1	4/14/2017 04:36
Zinc	0.0061	J	0.0014	0.050	mg/L	1	4/14/2017 04:36
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: AK
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 07:34
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 07:34
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 07:34
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 07:34
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 07:34
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 07:34
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 07:34
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 07:34
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 07:34
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 07:34
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 07:34
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 07:34
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 07:34
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 07:34
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 07:34
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 07:34

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-007
Collection Date: 4/5/2017 01:30 PM

Work Order: 1704435
Lab ID: 1704435-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 07:34
Acetone	U		0.92	50	µg/L	1	4/14/2017 07:34
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 07:34
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 07:34
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 07:34
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 07:34
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 07:34
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 07:34
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 07:34
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 07:34
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 07:34
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 07:34
cis-1,2-Dichloroethene	14		0.25	1.0	µg/L	1	4/14/2017 07:34
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 07:34
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 07:34
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 07:34
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 07:34
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 07:34
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 07:34
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 07:34
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 07:34
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 07:34
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 07:34
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 07:34
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 07:34
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 07:34
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 07:34
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 07:34
Trichloroethene	2.1		0.30	1.0	µg/L	1	4/14/2017 07:34
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 07:34
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 07:34
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 07:34
Surr: 1,2-Dichloroethane-d4	98.9			75-120	%REC	1	4/14/2017 07:34
Surr: 4-Bromofluorobenzene	83.6			80-110	%REC	1	4/14/2017 07:34
Surr: Dibromofluoromethane	96.3			85-115	%REC	1	4/14/2017 07:34
Surr: Toluene-d8	97.4			85-110	%REC	1	4/14/2017 07:34

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-008
Collection Date: 4/5/2017 02:15 PM

Work Order: 1704435
Lab ID: 1704435-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 07:59
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 07:59
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 07:59
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 07:59
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 07:59
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 07:59
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 07:59
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 07:59
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 07:59
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 07:59
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 07:59
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 07:59
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 07:59
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 07:59
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 07:59
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 07:59
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 07:59
Acetone	U		0.92	50	µg/L	1	4/14/2017 07:59
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 07:59
Bromodichloromethane	8.1		0.23	1.0	µg/L	1	4/14/2017 07:59
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 07:59
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 07:59
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 07:59
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 07:59
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 07:59
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 07:59
Chloroform	33		0.26	1.0	µg/L	1	4/14/2017 07:59
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 07:59
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 07:59
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 07:59
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 07:59
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 07:59
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 07:59
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 07:59
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 07:59
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 07:59
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 07:59
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 07:59

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040517-MR-008
Collection Date: 4/5/2017 02:15 PM

Work Order: 1704435
Lab ID: 1704435-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 07:59
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 07:59
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 07:59
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 07:59
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 07:59
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 07:59
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 07:59
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 07:59
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 07:59
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 07:59
Surr: 1,2-Dichloroethane-d4	99.9			75-120	%REC	1	4/14/2017 07:59
Surr: 4-Bromofluorobenzene	84.0			80-110	%REC	1	4/14/2017 07:59
Surr: Dibromofluoromethane	98.2			85-115	%REC	1	4/14/2017 07:59
Surr: Toluene-d8	96.9			85-110	%REC	1	4/14/2017 07:59

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-009
Collection Date: 4/6/2017 11:11 AM

Work Order: 1704435
Lab ID: 1704435-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 08:24
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 08:24
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 08:24
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 08:24
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 08:24
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 08:24
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 08:24
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 08:24
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 08:24
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 08:24
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 08:24
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 08:24
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 08:24
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 08:24
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 08:24
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 08:24
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 08:24
Acetone	U		0.92	50	µg/L	1	4/14/2017 08:24
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 08:24
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 08:24
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 08:24
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 08:24
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 08:24
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 08:24
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 08:24
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 08:24
Chloroform	3.6		0.26	1.0	µg/L	1	4/14/2017 08:24
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 08:24
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 08:24
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 08:24
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 08:24
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 08:24
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 08:24
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 08:24
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 08:24
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 08:24
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 08:24
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 08:24

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-009
Collection Date: 4/6/2017 11:11 AM

Work Order: 1704435
Lab ID: 1704435-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 08:24
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 08:24
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 08:24
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 08:24
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 08:24
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 08:24
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 08:24
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 08:24
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 08:24
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 08:24
Surr: 1,2-Dichloroethane-d4	103			75-120	%REC	1	4/14/2017 08:24
Surr: 4-Bromofluorobenzene	81.3			80-110	%REC	1	4/14/2017 08:24
Surr: Dibromofluoromethane	98.2			85-115	%REC	1	4/14/2017 08:24
Surr: Toluene-d8	95.3			85-110	%REC	1	4/14/2017 08:24

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-010
Collection Date: 4/6/2017 10:36 AM

Work Order: 1704435
Lab ID: 1704435-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 08:49
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 08:49
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 08:49
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 08:49
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 08:49
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 08:49
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 08:49
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 08:49
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 08:49
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 08:49
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 08:49
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 08:49
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 08:49
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 08:49
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 08:49
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 08:49
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 08:49
Acetone	U		0.92	50	µg/L	1	4/14/2017 08:49
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 08:49
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 08:49
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 08:49
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 08:49
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 08:49
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 08:49
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 08:49
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 08:49
Chloroform	4.2		0.26	1.0	µg/L	1	4/14/2017 08:49
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 08:49
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 08:49
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 08:49
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 08:49
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 08:49
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 08:49
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 08:49
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 08:49
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 08:49
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 08:49
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 08:49

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-010
Collection Date: 4/6/2017 10:36 AM

Work Order: 1704435
Lab ID: 1704435-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 08:49
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 08:49
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 08:49
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 08:49
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 08:49
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 08:49
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 08:49
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 08:49
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 08:49
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 08:49
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/14/2017 08:49
Surr: 4-Bromofluorobenzene	83.2			80-110	%REC	1	4/14/2017 08:49
Surr: Dibromofluoromethane	99.1			85-115	%REC	1	4/14/2017 08:49
Surr: Toluene-d8	96.3			85-110	%REC	1	4/14/2017 08:49

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-011
Collection Date: 4/6/2017 11:58 AM

Work Order: 1704435
Lab ID: 1704435-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 09:13
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 09:13
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 09:13
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 09:13
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 09:13
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 09:13
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 09:13
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 09:13
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 09:13
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 09:13
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 09:13
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 09:13
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 09:13
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 09:13
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 09:13
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 09:13
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 09:13
Acetone	U		0.92	50	µg/L	1	4/14/2017 09:13
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 09:13
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 09:13
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 09:13
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 09:13
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 09:13
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 09:13
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 09:13
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 09:13
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 09:13
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 09:13
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 09:13
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 09:13
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 09:13
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 09:13
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 09:13
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 09:13
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 09:13
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 09:13
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 09:13
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 09:13

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-011
Collection Date: 4/6/2017 11:58 AM

Work Order: 1704435
Lab ID: 1704435-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 09:13
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 09:13
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 09:13
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 09:13
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 09:13
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 09:13
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 09:13
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 09:13
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 09:13
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 09:13
Surr: 1,2-Dichloroethane-d4	110			75-120	%REC	1	4/14/2017 09:13
Surr: 4-Bromofluorobenzene	80.9			80-110	%REC	1	4/14/2017 09:13
Surr: Dibromofluoromethane	105			85-115	%REC	1	4/14/2017 09:13
Surr: Toluene-d8	94.5			85-110	%REC	1	4/14/2017 09:13

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-012
Collection Date: 4/6/2017 12:51 PM

Work Order: 1704435
Lab ID: 1704435-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 09:38
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 09:38
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 09:38
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 09:38
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 09:38
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 09:38
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 09:38
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 09:38
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 09:38
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 09:38
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 09:38
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 09:38
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 09:38
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 09:38
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 09:38
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 09:38
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 09:38
Acetone	U		0.92	50	µg/L	1	4/14/2017 09:38
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 09:38
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 09:38
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 09:38
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 09:38
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 09:38
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 09:38
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 09:38
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 09:38
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 09:38
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 09:38
cis-1,2-Dichloroethene	1.1		0.25	1.0	µg/L	1	4/14/2017 09:38
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 09:38
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 09:38
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 09:38
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 09:38
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 09:38
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 09:38
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 09:38
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 09:38
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 09:38

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-012
Collection Date: 4/6/2017 12:51 PM

Work Order: 1704435
Lab ID: 1704435-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 09:38
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 09:38
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 09:38
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 09:38
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 09:38
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 09:38
Trichloroethene	3.4		0.30	1.0	µg/L	1	4/14/2017 09:38
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 09:38
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 09:38
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 09:38
Surr: 1,2-Dichloroethane-d4	109			75-120	%REC	1	4/14/2017 09:38
Surr: 4-Bromofluorobenzene	82.2			80-110	%REC	1	4/14/2017 09:38
Surr: Dibromofluoromethane	105			85-115	%REC	1	4/14/2017 09:38
Surr: Toluene-d8	96.8			85-110	%REC	1	4/14/2017 09:38

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-013
Collection Date: 4/6/2017 02:20 PM

Work Order: 1704435
Lab ID: 1704435-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 10:03
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 10:03
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 10:03
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 10:03
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 10:03
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 10:03
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 10:03
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 10:03
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 10:03
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 10:03
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 10:03
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 10:03
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 10:03
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 10:03
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 10:03
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 10:03
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 10:03
Acetone	U		0.92	50	µg/L	1	4/14/2017 10:03
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 10:03
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 10:03
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 10:03
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 10:03
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 10:03
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 10:03
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 10:03
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 10:03
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 10:03
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 10:03
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 10:03
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 10:03
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 10:03
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 10:03
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 10:03
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 10:03
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 10:03
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 10:03
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 10:03
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 10:03

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-013
Collection Date: 4/6/2017 02:20 PM

Work Order: 1704435
Lab ID: 1704435-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 10:03
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 10:03
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 10:03
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 10:03
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 10:03
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 10:03
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 10:03
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 10:03
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 10:03
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 10:03
Surr: 1,2-Dichloroethane-d4	110			75-120	%REC	1	4/14/2017 10:03
Surr: 4-Bromofluorobenzene	80.8			80-110	%REC	1	4/14/2017 10:03
Surr: Dibromofluoromethane	105			85-115	%REC	1	4/14/2017 10:03
Surr: Toluene-d8	94.0			85-110	%REC	1	4/14/2017 10:03

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-014
Collection Date: 4/6/2017 02:37 PM

Work Order: 1704435
Lab ID: 1704435-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 10:28
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 10:28
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 10:28
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 10:28
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 10:28
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 10:28
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 10:28
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 10:28
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 10:28
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 10:28
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 10:28
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 10:28
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 10:28
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 10:28
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 10:28
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 10:28
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 10:28
Acetone	U		0.92	50	µg/L	1	4/14/2017 10:28
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 10:28
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 10:28
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 10:28
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 10:28
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 10:28
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 10:28
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 10:28
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 10:28
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 10:28
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 10:28
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 10:28
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 10:28
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 10:28
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 10:28
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 10:28
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 10:28
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 10:28
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 10:28
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 10:28
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 10:28

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-014
Collection Date: 4/6/2017 02:37 PM

Work Order: 1704435
Lab ID: 1704435-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 10:28
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 10:28
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 10:28
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 10:28
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 10:28
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 10:28
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 10:28
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 10:28
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 10:28
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 10:28
Surr: 1,2-Dichloroethane-d4	99.6			75-120	%REC	1	4/14/2017 10:28
Surr: 4-Bromofluorobenzene	83.6			80-110	%REC	1	4/14/2017 10:28
Surr: Dibromofluoromethane	98.2			85-115	%REC	1	4/14/2017 10:28
Surr: Toluene-d8	98.0			85-110	%REC	1	4/14/2017 10:28

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-015
Collection Date: 4/6/2017 04:43 PM

Work Order: 1704435
Lab ID: 1704435-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 10:53
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 10:53
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 10:53
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 10:53
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 10:53
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 10:53
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 10:53
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 10:53
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 10:53
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 10:53
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 10:53
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 10:53
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 10:53
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 10:53
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 10:53
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 10:53
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 10:53
Acetone	3.4	J	0.92	50	µg/L	1	4/14/2017 10:53
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 10:53
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 10:53
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 10:53
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 10:53
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 10:53
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 10:53
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 10:53
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 10:53
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 10:53
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 10:53
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 10:53
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 10:53
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 10:53
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 10:53
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 10:53
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 10:53
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 10:53
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 10:53
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 10:53
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 10:53

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040617-MR-015
Collection Date: 4/6/2017 04:43 PM

Work Order: 1704435
Lab ID: 1704435-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 10:53
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 10:53
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 10:53
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 10:53
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 10:53
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 10:53
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 10:53
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 10:53
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 10:53
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 10:53
Surr: 1,2-Dichloroethane-d4	106			75-120	%REC	1	4/14/2017 10:53
Surr: 4-Bromofluorobenzene	82.6			80-110	%REC	1	4/14/2017 10:53
Surr: Dibromofluoromethane	106			85-115	%REC	1	4/14/2017 10:53
Surr: Toluene-d8	94.6			85-110	%REC	1	4/14/2017 10:53

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-016
Collection Date: 4/7/2017 10:41 AM

Work Order: 1704435
Lab ID: 1704435-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 11:18
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 11:18
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 11:18
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 11:18
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 11:18
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 11:18
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 11:18
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 11:18
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 11:18
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 11:18
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 11:18
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 11:18
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 11:18
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 11:18
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 11:18
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 11:18
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 11:18
Acetone	U		0.92	50	µg/L	1	4/14/2017 11:18
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 11:18
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 11:18
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 11:18
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 11:18
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 11:18
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 11:18
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 11:18
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 11:18
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 11:18
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 11:18
cis-1,2-Dichloroethene	0.93	J	0.25	1.0	µg/L	1	4/14/2017 11:18
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 11:18
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 11:18
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 11:18
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 11:18
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 11:18
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 11:18
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 11:18
Methyl tert-butyl ether	0.57	J	0.12	5.0	µg/L	1	4/14/2017 11:18
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 11:18

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-016
Collection Date: 4/7/2017 10:41 AM

Work Order: 1704435
Lab ID: 1704435-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 11:18
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 11:18
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 11:18
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 11:18
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 11:18
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 11:18
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 11:18
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 11:18
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 11:18
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 11:18
Surr: 1,2-Dichloroethane-d4	114			75-120	%REC	1	4/14/2017 11:18
Surr: 4-Bromofluorobenzene	81.4			80-110	%REC	1	4/14/2017 11:18
Surr: Dibromofluoromethane	113			85-115	%REC	1	4/14/2017 11:18
Surr: Toluene-d8	96.8			85-110	%REC	1	4/14/2017 11:18

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-017
Collection Date: 4/7/2017 11:27 AM

Work Order: 1704435
Lab ID: 1704435-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 11:43
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 11:43
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 11:43
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 11:43
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 11:43
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 11:43
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 11:43
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 11:43
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 11:43
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 11:43
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 11:43
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 11:43
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 11:43
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 11:43
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 11:43
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 11:43
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 11:43
Acetone	U		0.92	50	µg/L	1	4/14/2017 11:43
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 11:43
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 11:43
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 11:43
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 11:43
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 11:43
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 11:43
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 11:43
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 11:43
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 11:43
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 11:43
cis-1,2-Dichloroethene	67		0.25	1.0	µg/L	1	4/14/2017 11:43
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 11:43
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 11:43
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 11:43
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 11:43
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 11:43
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 11:43
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 11:43
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 11:43
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 11:43

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-017
Collection Date: 4/7/2017 11:27 AM

Work Order: 1704435
Lab ID: 1704435-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 11:43
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 11:43
Tetrachloroethene	92		1.4	5.0	µg/L	5	4/17/2017 20:55
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 11:43
trans-1,2-Dichloroethene	1.8		0.28	1.0	µg/L	1	4/14/2017 11:43
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 11:43
Trichloroethene	5.7		0.30	1.0	µg/L	1	4/14/2017 11:43
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 11:43
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 11:43
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 11:43
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	1	4/14/2017 11:43
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	5	4/17/2017 20:55
Surr: 4-Bromofluorobenzene	81.2			80-110	%REC	1	4/14/2017 11:43
Surr: 4-Bromofluorobenzene	94.2			80-110	%REC	5	4/17/2017 20:55
Surr: Dibromofluoromethane	100			85-115	%REC	1	4/14/2017 11:43
Surr: Dibromofluoromethane	100			85-115	%REC	5	4/17/2017 20:55
Surr: Toluene-d8	93.6			85-110	%REC	1	4/14/2017 11:43
Surr: Toluene-d8	93.4			85-110	%REC	5	4/17/2017 20:55

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-018
Collection Date: 4/7/2017 12:56 PM

Work Order: 1704435
Lab ID: 1704435-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 12:08
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 12:08
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 12:08
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 12:08
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 12:08
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:08
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 12:08
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 12:08
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 12:08
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 12:08
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 12:08
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 12:08
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 12:08
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 12:08
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 12:08
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 12:08
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 12:08
Acetone	U		0.92	50	µg/L	1	4/14/2017 12:08
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 12:08
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 12:08
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 12:08
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 12:08
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 12:08
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 12:08
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 12:08
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 12:08
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 12:08
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 12:08
cis-1,2-Dichloroethene	0.91	J	0.25	1.0	µg/L	1	4/14/2017 12:08
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 12:08
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 12:08
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 12:08
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 12:08
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 12:08
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 12:08
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 12:08
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 12:08
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 12:08

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-018
Collection Date: 4/7/2017 12:56 PM

Work Order: 1704435
Lab ID: 1704435-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 12:08
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 12:08
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 12:08
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 12:08
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:08
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 12:08
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 12:08
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 12:08
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 12:08
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 12:08
Surr: 1,2-Dichloroethane-d4	99.8			75-120	%REC	1	4/14/2017 12:08
Surr: 4-Bromofluorobenzene	82.0			80-110	%REC	1	4/14/2017 12:08
Surr: Dibromofluoromethane	96.6			85-115	%REC	1	4/14/2017 12:08
Surr: Toluene-d8	96.2			85-110	%REC	1	4/14/2017 12:08

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-019
Collection Date: 4/7/2017 01:15 PM

Work Order: 1704435
Lab ID: 1704435-19
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 12:33
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 12:33
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 12:33
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 12:33
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 12:33
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:33
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 12:33
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 12:33
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 12:33
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 12:33
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 12:33
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 12:33
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 12:33
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 12:33
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 12:33
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 12:33
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 12:33
Acetone	U		0.92	50	µg/L	1	4/14/2017 12:33
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 12:33
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 12:33
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 12:33
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 12:33
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 12:33
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 12:33
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 12:33
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 12:33
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 12:33
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 12:33
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 12:33
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 12:33
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 12:33
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 12:33
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 12:33
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 12:33
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 12:33
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 12:33
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 12:33
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 12:33

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-019
Collection Date: 4/7/2017 01:15 PM

Work Order: 1704435
Lab ID: 1704435-19
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 12:33
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 12:33
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 12:33
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 12:33
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:33
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 12:33
Trichloroethene	2.2		0.30	1.0	µg/L	1	4/14/2017 12:33
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 12:33
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 12:33
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 12:33
Surr: 1,2-Dichloroethane-d4	100			75-120	%REC	1	4/14/2017 12:33
Surr: 4-Bromofluorobenzene	82.6			80-110	%REC	1	4/14/2017 12:33
Surr: Dibromofluoromethane	97.6			85-115	%REC	1	4/14/2017 12:33
Surr: Toluene-d8	96.2			85-110	%REC	1	4/14/2017 12:33

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-020
Collection Date: 4/7/2017 01:20 PM

Work Order: 1704435
Lab ID: 1704435-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 12:58
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 12:58
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 12:58
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 12:58
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 12:58
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:58
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 12:58
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 12:58
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 12:58
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 12:58
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 12:58
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 12:58
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 12:58
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 12:58
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 12:58
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 12:58
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 12:58
Acetone	6.0	J	0.92	50	µg/L	1	4/14/2017 12:58
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 12:58
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 12:58
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 12:58
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 12:58
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 12:58
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 12:58
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 12:58
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 12:58
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 12:58
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 12:58
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 12:58
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 12:58
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 12:58
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 12:58
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 12:58
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 12:58
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 12:58
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 12:58
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 12:58
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 12:58

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-020
Collection Date: 4/7/2017 01:20 PM

Work Order: 1704435
Lab ID: 1704435-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 12:58
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 12:58
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 12:58
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 12:58
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:58
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 12:58
Trichloroethene	1.8		0.30	1.0	µg/L	1	4/14/2017 12:58
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 12:58
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 12:58
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 12:58
Surr: 1,2-Dichloroethane-d4	100			75-120	%REC	1	4/14/2017 12:58
Surr: 4-Bromofluorobenzene	83.7			80-110	%REC	1	4/14/2017 12:58
Surr: Dibromofluoromethane	98.8			85-115	%REC	1	4/14/2017 12:58
Surr: Toluene-d8	96.6			85-110	%REC	1	4/14/2017 12:58

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-021
Collection Date: 4/7/2017 03:20 PM

Work Order: 1704435
Lab ID: 1704435-21
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/13/2017 23:56
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/13/2017 23:56
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/13/2017 23:56
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/13/2017 23:56
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/13/2017 23:56
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/13/2017 23:56
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/13/2017 23:56
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/13/2017 23:56
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/13/2017 23:56
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/13/2017 23:56
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/13/2017 23:56
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/13/2017 23:56
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/13/2017 23:56
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/13/2017 23:56
2-Butanone	U		0.58	25	µg/L	1	4/13/2017 23:56
2-Hexanone	U		0.13	50	µg/L	1	4/13/2017 23:56
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/13/2017 23:56
Acetone	U		0.92	50	µg/L	1	4/13/2017 23:56
Benzene	U		0.30	1.0	µg/L	1	4/13/2017 23:56
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/13/2017 23:56
Bromoform	U		0.77	1.0	µg/L	1	4/13/2017 23:56
Bromomethane	U		0.38	5.0	µg/L	1	4/13/2017 23:56
Carbon disulfide	U		0.23	5.0	µg/L	1	4/13/2017 23:56
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/13/2017 23:56
Chlorobenzene	U		0.27	1.0	µg/L	1	4/13/2017 23:56
Chloroethane	U		0.29	5.0	µg/L	1	4/13/2017 23:56
Chloroform	1.2		0.26	1.0	µg/L	1	4/13/2017 23:56
Chloromethane	U		0.17	5.0	µg/L	1	4/13/2017 23:56
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/13/2017 23:56
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/13/2017 23:56
Cyclohexane	U		0.22	1.0	µg/L	1	4/13/2017 23:56
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/13/2017 23:56
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/13/2017 23:56
Ethylbenzene	U		0.40	1.0	µg/L	1	4/13/2017 23:56
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/13/2017 23:56
Methyl acetate	U		0.23	10	µg/L	1	4/13/2017 23:56
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/13/2017 23:56
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/13/2017 23:56

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-021
Collection Date: 4/7/2017 03:20 PM

Work Order: 1704435
Lab ID: 1704435-21
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/13/2017 23:56
Styrene	U		0.24	1.0	µg/L	1	4/13/2017 23:56
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/13/2017 23:56
Toluene	U		0.37	1.0	µg/L	1	4/13/2017 23:56
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/13/2017 23:56
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/13/2017 23:56
Trichloroethene	U		0.30	1.0	µg/L	1	4/13/2017 23:56
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/13/2017 23:56
Vinyl chloride	U		0.20	1.0	µg/L	1	4/13/2017 23:56
Xylenes, Total	U		1.3	3.0	µg/L	1	4/13/2017 23:56
Surr: 1,2-Dichloroethane-d4	91.8			75-120	%REC	1	4/13/2017 23:56
Surr: 4-Bromofluorobenzene	94.4			80-110	%REC	1	4/13/2017 23:56
Surr: Dibromofluoromethane	93.5			85-115	%REC	1	4/13/2017 23:56
Surr: Toluene-d8	96.0			85-110	%REC	1	4/13/2017 23:56

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-022
Collection Date: 4/7/2017 04:00 PM

Work Order: 1704435
Lab ID: 1704435-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/14/2017 12:17
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/14/2017 12:17
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/14/2017 12:17
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/14/2017 12:17
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/14/2017 12:17
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:17
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/14/2017 12:17
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/14/2017 12:17
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/14/2017 12:17
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/14/2017 12:17
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/14/2017 12:17
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/14/2017 12:17
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/14/2017 12:17
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/14/2017 12:17
2-Butanone	U		0.58	25	µg/L	1	4/14/2017 12:17
2-Hexanone	U		0.13	50	µg/L	1	4/14/2017 12:17
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/14/2017 12:17
Acetone	U		0.92	50	µg/L	1	4/14/2017 12:17
Benzene	U		0.30	1.0	µg/L	1	4/14/2017 12:17
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/14/2017 12:17
Bromoform	U		0.77	1.0	µg/L	1	4/14/2017 12:17
Bromomethane	U		0.38	5.0	µg/L	1	4/14/2017 12:17
Carbon disulfide	U		0.23	5.0	µg/L	1	4/14/2017 12:17
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/14/2017 12:17
Chlorobenzene	U		0.27	1.0	µg/L	1	4/14/2017 12:17
Chloroethane	U		0.29	5.0	µg/L	1	4/14/2017 12:17
Chloroform	U		0.26	1.0	µg/L	1	4/14/2017 12:17
Chloromethane	U		0.17	5.0	µg/L	1	4/14/2017 12:17
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/14/2017 12:17
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/14/2017 12:17
Cyclohexane	U		0.22	1.0	µg/L	1	4/14/2017 12:17
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/14/2017 12:17
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/14/2017 12:17
Ethylbenzene	U		0.40	1.0	µg/L	1	4/14/2017 12:17
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/14/2017 12:17
Methyl acetate	U		0.23	10	µg/L	1	4/14/2017 12:17
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/14/2017 12:17
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/14/2017 12:17

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: WG-017360-040717-MR-022
Collection Date: 4/7/2017 04:00 PM

Work Order: 1704435
Lab ID: 1704435-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/14/2017 12:17
Styrene	U		0.24	1.0	µg/L	1	4/14/2017 12:17
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/14/2017 12:17
Toluene	U		0.37	1.0	µg/L	1	4/14/2017 12:17
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/14/2017 12:17
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/14/2017 12:17
Trichloroethene	U		0.30	1.0	µg/L	1	4/14/2017 12:17
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/14/2017 12:17
Vinyl chloride	U		0.20	1.0	µg/L	1	4/14/2017 12:17
Xylenes, Total	U		1.3	3.0	µg/L	1	4/14/2017 12:17
Surr: 1,2-Dichloroethane-d4	90.7			75-120	%REC	1	4/14/2017 12:17
Surr: 4-Bromofluorobenzene	95.7			80-110	%REC	1	4/14/2017 12:17
Surr: Dibromofluoromethane	91.3			85-115	%REC	1	4/14/2017 12:17
Surr: Toluene-d8	96.6			85-110	%REC	1	4/14/2017 12:17

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: Trip Blank-1
Collection Date: 4/7/2017

Work Order: 1704435
Lab ID: 1704435-23
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/13/2017 23:35
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/13/2017 23:35
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/13/2017 23:35
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/13/2017 23:35
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/13/2017 23:35
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/13/2017 23:35
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/13/2017 23:35
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/13/2017 23:35
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/13/2017 23:35
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/13/2017 23:35
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/13/2017 23:35
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/13/2017 23:35
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/13/2017 23:35
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/13/2017 23:35
2-Butanone	U		0.58	25	µg/L	1	4/13/2017 23:35
2-Hexanone	U		0.13	50	µg/L	1	4/13/2017 23:35
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/13/2017 23:35
Acetone	U		0.92	50	µg/L	1	4/13/2017 23:35
Benzene	U		0.30	1.0	µg/L	1	4/13/2017 23:35
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/13/2017 23:35
Bromoform	U		0.77	1.0	µg/L	1	4/13/2017 23:35
Bromomethane	U		0.38	5.0	µg/L	1	4/13/2017 23:35
Carbon disulfide	U		0.23	5.0	µg/L	1	4/13/2017 23:35
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/13/2017 23:35
Chlorobenzene	U		0.27	1.0	µg/L	1	4/13/2017 23:35
Chloroethane	U		0.29	5.0	µg/L	1	4/13/2017 23:35
Chloroform	U		0.26	1.0	µg/L	1	4/13/2017 23:35
Chloromethane	U		0.17	5.0	µg/L	1	4/13/2017 23:35
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/13/2017 23:35
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/13/2017 23:35
Cyclohexane	U		0.22	1.0	µg/L	1	4/13/2017 23:35
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/13/2017 23:35
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/13/2017 23:35
Ethylbenzene	U		0.40	1.0	µg/L	1	4/13/2017 23:35
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/13/2017 23:35
Methyl acetate	U		0.23	10	µg/L	1	4/13/2017 23:35
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/13/2017 23:35
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/13/2017 23:35

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

ALS Group, USA

Date: 18-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (017360)
Sample ID: Trip Blank-1
Collection Date: 4/7/2017

Work Order: 1704435
Lab ID: 1704435-23
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/13/2017 23:35
Styrene	U		0.24	1.0	µg/L	1	4/13/2017 23:35
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/13/2017 23:35
Toluene	U		0.37	1.0	µg/L	1	4/13/2017 23:35
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/13/2017 23:35
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/13/2017 23:35
Trichloroethene	U		0.30	1.0	µg/L	1	4/13/2017 23:35
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/13/2017 23:35
Vinyl chloride	U		0.20	1.0	µg/L	1	4/13/2017 23:35
Xylenes, Total	U		1.3	3.0	µg/L	1	4/13/2017 23:35
Surr: 1,2-Dichloroethane-d4	91.6			75-120	%REC	1	4/13/2017 23:35
Surr: 4-Bromofluorobenzene	98.2			80-110	%REC	1	4/13/2017 23:35
Surr: Dibromofluoromethane	91.4			85-115	%REC	1	4/13/2017 23:35
Surr: Toluene-d8	95.3			85-110	%REC	1	4/13/2017 23:35

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **100463** Instrument ID **HG1** Method: **SW7470A** (Dissolve)

MBLK		Sample ID: MBLK-100456-100463				Units: mg/L		Analysis Date: 4/12/2017 03:39 PM			
Client ID:		Run ID: HG1_170412A				SeqNo: 4370951		Prep Date: 4/12/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.000019	0.00020								

MBLK		Sample ID: MBLK-100463-100463				Units: mg/L		Analysis Date: 4/12/2017 03:44 PM			
Client ID:		Run ID: HG1_170412A				SeqNo: 4370953		Prep Date: 4/12/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.000019	0.00020								

LCS		Sample ID: LCS-100456-100463				Units: mg/L		Analysis Date: 4/12/2017 03:42 PM			
Client ID:		Run ID: HG1_170412A				SeqNo: 4370952		Prep Date: 4/12/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00202	0.000019	0.00020	0.002	0	101	80-120	0			

LCS		Sample ID: LCS-100463-100463				Units: mg/L		Analysis Date: 4/12/2017 03:47 PM			
Client ID:		Run ID: HG1_170412A				SeqNo: 4370954		Prep Date: 4/12/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00197	0.000019	0.00020	0.002	0	98.5	80-120	0			

MS		Sample ID: 1704322-01AMS				Units: mg/L		Analysis Date: 4/12/2017 04:19 PM			
Client ID:		Run ID: HG1_170412A				SeqNo: 4370964		Prep Date: 4/12/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0185	0.00019	0.0020	0.02	-0.00009	93	75-125	0			

MSD		Sample ID: 1704322-01AMSD				Units: mg/L		Analysis Date: 4/12/2017 04:22 PM			
Client ID:		Run ID: HG1_170412A				SeqNo: 4370965		Prep Date: 4/12/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0188	0.00019	0.0020	0.02	-0.00009	94.4	75-125	0.0185	1.61	20	

The following samples were analyzed in this batch: 1704435-06B 1704435-07B

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **100526** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-100526-100526				Units: mg/L		Analysis Date: 4/13/2017 02:00 PM			
Client ID:		Run ID: ICPMS2_170413A				SeqNo: 4372543		Prep Date: 4/13/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00017	0.0050								
Arsenic	U	0.00087	0.0050								
Barium	U	0.0022	0.0050								
Cadmium	U	0.00005	0.0020								
Chromium	U	0.00065	0.0050								
Cobalt	U	0.00014	0.0050								
Copper	U	0.00028	0.0050								
Iron	U	0.0046	0.080								
Lead	U	0.00033	0.0050								
Manganese	U	0.00051	0.0050								
Molybdenum	U	0.00031	0.0050								
Nickel	U	0.00041	0.0050								
Selenium	U	0.0009	0.0050								
Silver	U	0.00005	0.0050								
Vanadium	U	0.00098	0.0050								
Zinc	U	0.0014	0.010								

MBLK		Sample ID: MBLK-100526-100526				Units: mg/L		Analysis Date: 4/14/2017 08:51 AM			
Client ID:		Run ID: ICPMS2_170413A				SeqNo: 4374052		Prep Date: 4/13/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	U	0.00012	0.0020								
Thallium	U	0.00016	0.0050								

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **100526** Instrument ID **ICPMS2** Method: **SW6020A**

LCS Sample ID: LCS-100526-100526					Units: mg/L			Analysis Date: 4/13/2017 02:06 PM			
Client ID:		Run ID: ICPMS2_170413A			SeqNo: 4372544		Prep Date: 4/13/2017		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09507	0.00017	0.0050	0.1	0	95.1	80-120	0			
Arsenic	0.09666	0.00087	0.0050	0.1	0	96.7	80-120	0			
Barium	0.09188	0.0022	0.0050	0.1	0	91.9	80-120	0			
Cadmium	0.09265	0.00005	0.0020	0.1	0	92.6	80-120	0			
Chromium	0.0913	0.00065	0.0050	0.1	0	91.3	80-120	0			
Cobalt	0.08979	0.00014	0.0050	0.1	0	89.8	80-120	0			
Copper	0.09193	0.00028	0.0050	0.1	0	91.9	80-120	0			
Iron	9.4	0.0046	0.080	10	0	94	80-120	0			
Lead	0.09436	0.00033	0.0050	0.1	0	94.4	80-120	0			
Manganese	0.09418	0.00051	0.0050	0.1	0	94.2	80-120	0			
Molybdenum	0.08995	0.00031	0.0050	0.1	0	90	80-120	0			
Nickel	0.09024	0.00041	0.0050	0.1	0	90.2	80-120	0			
Selenium	0.09211	0.0009	0.0050	0.1	0	92.1	80-120	0			
Silver	0.09216	0.00005	0.0050	0.1	0	92.2	80-120	0			
Vanadium	0.09238	0.00098	0.0050	0.1	0	92.4	80-120	0			
Zinc	0.09303	0.0014	0.010	0.1	0	93	80-120	0			

LCS Sample ID: LCS-100526-100526					Units: mg/L			Analysis Date: 4/14/2017 08:57 AM			
Client ID:		Run ID: ICPMS2_170413A			SeqNo: 4374053		Prep Date: 4/13/2017		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09909	0.00012	0.0020	0.1	0	99.1	80-120	0			
Thallium	0.09685	0.00016	0.0050	0.1	0	96.8	80-120	0			

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **100526** Instrument ID **ICPMS2** Method: **SW6020A**

MS		Sample ID: 1704576-01AMS				Units: mg/L		Analysis Date: 4/13/2017 02:16 PM			
Client ID:		Run ID: ICPMS2_170413A				SeqNo: 4372546		Prep Date: 4/13/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.9441	0.0017	0.050	1	0.0007591	94.3	75-125	0			
Arsenic	0.9754	0.0087	0.050	1	-0.001123	97.7	75-125	0			
Barium	2.259	0.022	0.050	1	1.306	95.3	75-125	0			
Cadmium	0.9203	0.0005	0.020	1	0.001162	91.9	75-125	0			
Chromium	0.9103	0.0065	0.050	1	0.0002694	91	75-125	0			
Cobalt	0.8803	0.0014	0.050	1	0.001164	87.9	75-125	0			
Copper	0.9068	0.0028	0.050	1	0.0047	90.2	75-125	0			
Iron	93.19	0.046	0.80	100	0.1095	93.1	75-125	0			
Lead	0.9431	0.0033	0.050	1	0.004628	93.8	75-125	0			
Manganese	1.611	0.0051	0.050	1	0.5833	103	75-125	0			
Molybdenum	0.9128	0.0031	0.050	1	0.004628	90.8	75-125	0			
Nickel	0.8908	0.0041	0.050	1	0.007657	88.3	75-125	0			
Selenium	0.9647	0.009	0.050	1	0.003068	96.2	75-125	0			
Silver	0.8659	0.0005	0.050	1	0.0002562	86.6	75-125	0			
Vanadium	0.9296	0.0098	0.050	1	0.003679	92.6	75-125	0			
Zinc	0.9352	0.014	0.10	1	0.01898	91.6	75-125	0			

MS		Sample ID: 1704576-01AMS				Units: mg/L		Analysis Date: 4/14/2017 09:07 AM			
Client ID:		Run ID: ICPMS2_170413A				SeqNo: 4374055		Prep Date: 4/13/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.9784	0.0012	0.020	1	0.0003585	97.8	75-125	0			
Thallium	0.9652	0.0016	0.050	1	0.01071	95.4	75-125	0			

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **100526** Instrument ID **ICPMS2** Method: **SW6020A**

MSD					Sample ID: 1704576-01AMSD			Units: mg/L		Analysis Date: 4/13/2017 02:21 PM	
Client ID:					Run ID: ICPMS2_170413A			SeqNo: 4372547		Prep Date: 4/13/2017	
								DF: 1			
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.9359	0.0017	0.050	1	0.0007591	93.5	75-125	0.9441	0.872	20	
Arsenic	0.9696	0.0087	0.050	1	-0.001123	97.1	75-125	0.9754	0.596	20	
Barium	2.291	0.022	0.050	1	1.306	98.5	75-125	2.259	1.41	20	
Cadmium	0.9364	0.0005	0.020	1	0.001162	93.5	75-125	0.9203	1.73	20	
Chromium	0.901	0.0065	0.050	1	0.0002694	90.1	75-125	0.9103	1.03	20	
Cobalt	0.8911	0.0014	0.050	1	0.001164	89	75-125	0.8803	1.22	20	
Copper	0.915	0.0028	0.050	1	0.0047	91	75-125	0.9068	0.9	20	
Iron	92.68	0.046	0.80	100	0.1095	92.6	75-125	93.19	0.549	20	
Lead	0.9585	0.0033	0.050	1	0.004628	95.4	75-125	0.9431	1.62	20	
Manganese	1.625	0.0051	0.050	1	0.5833	104	75-125	1.611	0.865	20	
Molybdenum	0.9348	0.0031	0.050	1	0.004628	93	75-125	0.9128	2.38	20	
Nickel	0.9043	0.0041	0.050	1	0.007657	89.7	75-125	0.8908	1.5	20	
Selenium	0.9392	0.009	0.050	1	0.003068	93.6	75-125	0.9647	2.68	20	
Silver	0.8609	0.0005	0.050	1	0.0002562	86.1	75-125	0.8659	0.579	20	
Vanadium	0.9389	0.0098	0.050	1	0.003679	93.5	75-125	0.9296	0.995	20	
Zinc	0.9495	0.014	0.10	1	0.01898	93.1	75-125	0.9352	1.52	20	

MSD					Sample ID: 1704576-01AMSD			Units: mg/L		Analysis Date: 4/14/2017 09:13 AM	
Client ID:					Run ID: ICPMS2_170413A			SeqNo: 4374056		Prep Date: 4/13/2017	
								DF: 1			
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.9959	0.0012	0.020	1	0.0003585	99.6	75-125	0.9784	1.77	20	
Thallium	0.9981	0.0016	0.050	1	0.01071	98.7	75-125	0.9652	3.35	20	

The following samples were analyzed in this batch:

1704435-06B

1704435-07B

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209705** Instrument ID **VMS7** Method: **SW8260B**

MBLK		Sample ID: VBLKW2-170413-R209705				Units: µg/L		Analysis Date: 4/13/2017 10:52 PM			
Client ID:		Run ID: VMS7_170413B				SeqNo: 4374992		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.36	1.0								
1,1,2,2-Tetrachloroethane	U	0.19	1.0								
1,1,2-Trichloroethane	U	0.4	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.42	1.0								
1,1-Dichloroethane	U	0.31	1.0								
1,1-Dichloroethene	U	0.28	1.0								
1,2,4-Trichlorobenzene	U	0.21	1.0								
1,2-Dibromo-3-chloropropane	U	0.97	1.0								
1,2-Dibromoethane	U	0.98	1.0								
1,2-Dichlorobenzene	U	0.22	1.0								
1,2-Dichloroethane	U	0.17	1.0								
1,2-Dichloropropane	U	0.25	1.0								
1,3-Dichlorobenzene	U	0.29	1.0								
1,4-Dichlorobenzene	U	0.21	1.0								
2-Butanone	U	0.58	5.0								
2-Hexanone	U	0.13	5.0								
4-Methyl-2-pentanone	U	0.11	1.0								
Acetone	U	0.92	10								
Benzene	U	0.3	1.0								
Bromodichloromethane	U	0.23	1.0								
Bromoform	U	0.77	1.0								
Bromomethane	U	0.38	1.0								
Carbon disulfide	U	0.23	1.0								
Carbon tetrachloride	U	0.31	1.0								
Chlorobenzene	U	0.27	1.0								
Chloroethane	U	0.29	1.0								
Chloroform	U	0.26	1.0								
Chloromethane	U	0.17	1.0								
cis-1,2-Dichloroethene	U	0.25	1.0								
cis-1,3-Dichloropropene	U	0.39	1.0								
Cyclohexane	U	0.22	1.0								
Dibromochloromethane	U	0.38	1.0								
Dichlorodifluoromethane	U	0.13	1.0								
Ethylbenzene	U	0.4	1.0								
Isopropylbenzene	U	0.31	1.0								
Methyl acetate	U	0.23	2.0								
Methyl tert-butyl ether	U	0.12	1.0								
Methylcyclohexane	U	0.27	1.0								
Methylene chloride	U	0.56	5.0								
Styrene	U	0.24	1.0								
Tetrachloroethene	U	0.27	1.0								
Toluene	U	0.37	1.0								
trans-1,2-Dichloroethene	U	0.28	1.0								

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209705	Instrument ID VMS7	Method: SW8260B							
trans-1,3-Dichloropropene	U	0.82	1.0						
Trichloroethene	U	0.3	1.0						
Trichlorofluoromethane	U	0.2	1.0						
Vinyl chloride	U	0.2	1.0						
Xylenes, Total	U	1.3	3.0						
Surr: 1,2-Dichloroethane-d4	18.94	0	0	20	0	94.7	75-120	0	
Surr: 4-Bromofluorobenzene	19.25	0	0	20	0	96.2	80-110	0	
Surr: Dibromofluoromethane	18.58	0	0	20	0	92.9	85-115	0	
Surr: Toluene-d8	19.33	0	0	20	0	96.6	85-110	0	

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209705** Instrument ID **VMS7** Method: **SW8260B**

LCS		Sample ID: VLCSW2-170413-R209705				Units: µg/L		Analysis Date: 4/13/2017 09:49 PM			
Client ID:		Run ID: VMS7_170413B				SeqNo: 4374991		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.31	0.36	1.0	20	0	96.6	75-130	0			
1,1,2,2-Tetrachloroethane	21.59	0.19	1.0	20	0	108	75-130	0			
1,1,2-Trichloroethane	21.22	0.4	1.0	20	0	106	75-125	0			
1,1-Dichloroethane	18.31	0.31	1.0	20	0	91.6	75-133	0			
1,1-Dichloroethene	27.6	0.28	1.0	20	0	138	70-145	0			
1,2,4-Trichlorobenzene	21.61	0.21	1.0	20	0	108	70-135	0			
1,2-Dibromo-3-chloropropane	20.65	0.97	1.0	20	0	103	60-130	0			
1,2-Dibromoethane	29.84	0.98	1.0	20	0	149	90-195	0			
1,2-Dichlorobenzene	20.68	0.22	1.0	20	0	103	70-130	0			
1,2-Dichloroethane	18.87	0.17	1.0	20	0	94.4	78-125	0			
1,2-Dichloropropane	18.06	0.25	1.0	20	0	90.3	75-125	0			
1,3-Dichlorobenzene	21.15	0.29	1.0	20	0	106	75-130	0			
1,4-Dichlorobenzene	20.95	0.21	1.0	20	0	105	75-130	0			
2-Butanone	20.19	0.58	5.0	20	0	101	55-150	0			
2-Hexanone	22.89	0.13	5.0	20	0	114	60-135	0			
4-Methyl-2-pentanone	26.79	0.11	1.0	20	0	134	77-178	0			
Acetone	32.89	0.92	10	20	0	164	60-160	0			S
Benzene	19.63	0.3	1.0	20	0	98.2	85-125	0			
Bromodichloromethane	18.14	0.23	1.0	20	0	90.7	75-125	0			
Bromoform	18.16	0.77	1.0	20	0	90.8	60-125	0			
Bromomethane	25.22	0.38	1.0	20	0	126	30-185	0			
Carbon disulfide	24.94	0.23	1.0	20	0	125	60-165	0			
Carbon tetrachloride	18.11	0.31	1.0	20	0	90.6	65-140	0			
Chlorobenzene	20.87	0.27	1.0	20	0	104	80-120	0			
Chloroethane	27.7	0.29	1.0	20	0	138	50-140	0			
Chloroform	18.41	0.26	1.0	20	0	92	80-130	0			
Chloromethane	23.48	0.17	1.0	20	0	117	46-148	0			
cis-1,2-Dichloroethene	17.35	0.25	1.0	20	0	86.8	75-134	0			
cis-1,3-Dichloropropene	18.41	0.39	1.0	20	0	92	70-130	0			
Dibromochloromethane	16.72	0.38	1.0	20	0	83.6	60-115	0			
Dichlorodifluoromethane	18.04	0.13	1.0	20	0	90.2	20-120	0			
Ethylbenzene	19.62	0.4	1.0	20	0	98.1	85-125	0			
Isopropylbenzene	20.13	0.31	1.0	20	0	101	80-127	0			
Methyl tert-butyl ether	22.53	0.12	1.0	20	0	113	80-130	0			
Methylene chloride	25.41	0.56	5.0	20	0	127	75-140	0			
Styrene	21.64	0.24	1.0	20	0	108	83-137	0			
Tetrachloroethene	24.7	0.27	1.0	20	0	124	68-166	0			
Toluene	18.87	0.37	1.0	20	0	94.4	85-125	0			
trans-1,2-Dichloroethene	20.02	0.28	1.0	20	0	100	80-140	0			
trans-1,3-Dichloropropene	17.23	0.82	1.0	20	0	86.2	56-132	0			
Trichloroethene	20.77	0.3	1.0	20	0	104	84-130	0			
Trichlorofluoromethane	23.83	0.2	1.0	20	0	119	60-140	0			
Vinyl chloride	24.98	0.2	1.0	20	0	125	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209705		Instrument ID VMS7			Method: SW8260B			
Xylenes, Total	58.9	1.3	3.0	60	0	98.2	80-126	0
Surr: 1,2-Dichloroethane-d4	18.83	0	0	20	0	94.2	75-120	0
Surr: 4-Bromofluorobenzene	19.27	0	0	20	0	96.4	80-110	0
Surr: Dibromofluoromethane	19.34	0	0	20	0	96.7	85-115	0
Surr: Toluene-d8	19.34	0	0	20	0	96.7	85-110	0

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209705** Instrument ID **VMS7** Method: **SW8260B**

MS					Units: µg/L			Analysis Date: 4/14/2017 05:54 AM			
Client ID:		Run ID: VMS7_170413B			SeqNo: 4375008		Prep Date:		DF: 10		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	188.2	3.6	10	200	0	94.1	75-130	0			
1,1,2,2-Tetrachloroethane	180.2	1.9	10	200	0	90.1	75-130	0			
1,1,2-Trichloroethane	181.8	4	10	200	0	90.9	75-125	0			
1,1-Dichloroethane	171.8	3.1	10	200	0	85.9	75-133	0			
1,1-Dichloroethene	271.1	2.8	10	200	0	136	70-145	0			
1,2,4-Trichlorobenzene	181.6	2.1	10	200	0	90.8	70-135	0			
1,2-Dibromo-3-chloropropane	160.3	9.7	10	200	0	80.2	60-130	0			
1,2-Dibromoethane	256.2	9.8	10	200	0	128	90-195	0			
1,2-Dichlorobenzene	179.8	2.2	10	200	0	89.9	70-130	0			
1,2-Dichloroethane	177.3	1.7	10	200	0	88.6	78-125	0			
1,2-Dichloropropane	170.5	2.5	10	200	0	85.2	75-125	0			
1,3-Dichlorobenzene	185.7	2.9	10	200	0	92.8	75-130	0			
1,4-Dichlorobenzene	182	2.1	10	200	0	91	75-130	0			
2-Butanone	155.7	5.8	50	200	1.87	76.9	55-150	0			
2-Hexanone	172.9	1.3	50	200	0	86.4	60-135	0			
4-Methyl-2-pentanone	211.3	1.1	10	200	0	106	77-178	0			
Acetone	264.5	9.2	100	200	0	132	60-160	0			
Benzene	188.2	3	10	200	1.6	93.3	85-125	0			
Bromodichloromethane	165.9	2.3	10	200	0	83	75-125	0			
Bromoform	151.6	7.7	10	200	0	75.8	60-125	0			
Bromomethane	247.8	3.8	10	200	0	124	30-185	0			
Carbon disulfide	228.6	2.3	10	200	0	114	60-165	0			
Carbon tetrachloride	182.2	3.1	10	200	0	91.1	65-140	0			
Chlorobenzene	189	2.7	10	200	0	94.5	80-120	0			
Chloroethane	280.5	2.9	10	200	0	140	50-140	0			S
Chloroform	169.5	2.6	10	200	0	84.8	80-130	0			
Chloromethane	250.4	1.7	10	200	0	125	46-148	0			
cis-1,2-Dichloroethene	161.1	2.5	10	200	0	80.6	75-134	0			
cis-1,3-Dichloropropene	157.7	3.9	10	200	0	78.8	70-130	0			
Dibromochloromethane	154	3.8	10	200	0	77	60-115	0			
Dichlorodifluoromethane	190.4	1.3	10	200	0	95.2	20-120	0			
Ethylbenzene	187.3	4	10	200	6.43	90.4	85-125	0			
Isopropylbenzene	195.2	3.1	10	200	3.95	95.6	80-127	0			
Methyl tert-butyl ether	173	1.2	10	200	0	86.5	80-130	0			
Methylene chloride	170.3	5.6	50	200	0	85.2	75-140	0			
Styrene	196.2	2.4	10	200	0	98.1	83-137	0			
Tetrachloroethene	236.1	2.7	10	200	0	118	68-166	0			
Toluene	179.6	3.7	10	200	1.02	89.3	85-125	0			
trans-1,2-Dichloroethene	170.2	2.8	10	200	0	85.1	80-140	0			
trans-1,3-Dichloropropene	142.8	8.2	10	200	0	71.4	56-132	0			
Trichloroethene	204.5	3	10	200	0	102	84-130	0			
Trichlorofluoromethane	239.3	2	10	200	0	120	60-140	0			
Vinyl chloride	253.6	2	10	200	0	127	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209705		Instrument ID VMS7		Method: SW8260B					
Xylenes, Total	561	13	30	600	2.87	93	80-126	0	
Surr: 1,2-Dichloroethane-d4	189.5	0	0	200	0	94.8	75-120	0	
Surr: 4-Bromofluorobenzene	198.4	0	0	200	0	99.2	80-110	0	
Surr: Dibromofluoromethane	204.1	0	0	200	0	102	85-115	0	
Surr: Toluene-d8	193.3	0	0	200	0	96.6	85-110	0	

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

Client: GHD Services Inc.
 Work Order: 1704435
 Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209705** Instrument ID **VMS7** Method: **SW8260B**

MSD					Sample ID: 1704696-07A MSD			Units: µg/L		Analysis Date: 4/14/2017 06:16 AM	
Client ID:					Run ID: VMS7_170413B			SeqNo: 4375009		Prep Date:	
										DF: 10	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	189.1	3.6	10	200	0	94.6	75-130	188.2	0.477	30	
1,1,2,2-Tetrachloroethane	173.9	1.9	10	200	0	87	75-130	180.2	3.56	30	
1,1,2-Trichloroethane	186.6	4	10	200	0	93.3	75-125	181.8	2.61	30	
1,1-Dichloroethane	175.2	3.1	10	200	0	87.6	75-133	171.8	1.96	30	
1,1-Dichloroethene	246	2.8	10	200	0	123	70-145	271.1	9.71	30	
1,2,4-Trichlorobenzene	193.8	2.1	10	200	0	96.9	70-135	181.6	6.5	30	
1,2-Dibromo-3-chloropropane	150.3	9.7	10	200	0	75.2	60-130	160.3	6.44	30	
1,2-Dibromoethane	260	9.8	10	200	0	130	90-195	256.2	1.47	30	
1,2-Dichlorobenzene	192.9	2.2	10	200	0	96.4	70-130	179.8	7.03	30	
1,2-Dichloroethane	170.3	1.7	10	200	0	85.2	78-125	177.3	4.03	30	
1,2-Dichloropropane	167.1	2.5	10	200	0	83.6	75-125	170.5	2.01	30	
1,3-Dichlorobenzene	194.1	2.9	10	200	0	97	75-130	185.7	4.42	30	
1,4-Dichlorobenzene	195.1	2.1	10	200	0	97.6	75-130	182	6.95	30	
2-Butanone	145.6	5.8	50	200	1.87	71.9	55-150	155.7	6.7	30	
2-Hexanone	176.3	1.3	50	200	0	88.2	60-135	172.9	1.95	30	
4-Methyl-2-pentanone	204.2	1.1	10	200	0	102	77-178	211.3	3.42	30	
Acetone	232.9	9.2	100	200	0	116	60-160	264.5	12.7	30	
Benzene	188.9	3	10	200	1.6	93.6	85-125	188.2	0.371	30	
Bromodichloromethane	162.2	2.3	10	200	0	81.1	75-125	165.9	2.26	30	
Bromoform	156.2	7.7	10	200	0	78.1	60-125	151.6	2.99	30	
Bromomethane	238.3	3.8	10	200	0	119	30-185	247.8	3.91	30	
Carbon disulfide	234.8	2.3	10	200	0	117	60-165	228.6	2.68	30	
Carbon tetrachloride	186.6	3.1	10	200	0	93.3	65-140	182.2	2.39	30	
Chlorobenzene	195.2	2.7	10	200	0	97.6	80-120	189	3.23	30	
Chloroethane	265.4	2.9	10	200	0	133	50-140	280.5	5.53	30	
Chloroform	168	2.6	10	200	0	84	80-130	169.5	0.889	30	
Chloromethane	236.3	1.7	10	200	0	118	46-148	250.4	5.79	30	
cis-1,2-Dichloroethene	159.2	2.5	10	200	0	79.6	75-134	161.1	1.19	30	
cis-1,3-Dichloropropene	158.1	3.9	10	200	0	79	70-130	157.7	0.253	30	
Dibromochloromethane	152.9	3.8	10	200	0	76.4	60-115	154	0.717	30	
Dichlorodifluoromethane	179.8	1.3	10	200	0	89.9	20-120	190.4	5.73	30	
Ethylbenzene	196.9	4	10	200	6.43	95.2	85-125	187.3	5	30	
Isopropylbenzene	199.9	3.1	10	200	3.95	98	80-127	195.2	2.38	30	
Methyl tert-butyl ether	170.8	1.2	10	200	0	85.4	80-130	173	1.28	30	
Methylene chloride	169.1	5.6	50	200	0	84.6	75-140	170.3	0.707	30	
Styrene	198.2	2.4	10	200	0	99.1	83-137	196.2	1.01	30	
Tetrachloroethene	243.9	2.7	10	200	0	122	68-166	236.1	3.25	30	
Toluene	185.5	3.7	10	200	1.02	92.2	85-125	179.6	3.23	30	
trans-1,2-Dichloroethene	165.5	2.8	10	200	0	82.8	80-140	170.2	2.8	30	
trans-1,3-Dichloropropene	145.5	8.2	10	200	0	72.8	56-132	142.8	1.87	30	
Trichloroethene	203.4	3	10	200	0	102	84-130	204.5	0.539	30	
Trichlorofluoromethane	234.3	2	10	200	0	117	60-140	239.3	2.11	30	
Vinyl chloride	259.5	2	10	200	0	130	50-136	253.6	2.3	30	

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209705		Instrument ID VMS7			Method: SW8260B						
Xylenes, Total		572.6	13	30	600	2.87	95	80-126	561	2.05	30
Surr: 1,2-Dichloroethane-d4		182.9	0	0	200	0	91.4	75-120	189.5	3.54	30
Surr: 4-Bromofluorobenzene		196.3	0	0	200	0	98.2	80-110	198.4	1.06	30
Surr: Dibromofluoromethane		194.7	0	0	200	0	97.4	85-115	204.1	4.71	30
Surr: Toluene-d8		197.1	0	0	200	0	98.6	85-110	193.3	1.95	30

The following samples were analyzed in this batch:

1704435-21A	1704435-22A	1704435-23A
-------------	-------------	-------------

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209744** Instrument ID **VMS9** Method: **SW8260B**

MBLK		Sample ID: VLKW2-170413-R209744				Units: µg/L		Analysis Date: 4/14/2017 04:15 AM			
Client ID:		Run ID: VMS9_170413B				SeqNo: 4375180		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.36	1.0								
1,1,2,2-Tetrachloroethane	U	0.19	1.0								
1,1,2-Trichloroethane	U	0.4	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.42	1.0								
1,1-Dichloroethane	U	0.31	1.0								
1,1-Dichloroethene	U	0.28	1.0								
1,2,4-Trichlorobenzene	U	0.21	1.0								
1,2-Dibromo-3-chloropropane	U	0.97	1.0								
1,2-Dibromoethane	U	0.98	1.0								
1,2-Dichlorobenzene	U	0.22	1.0								
1,2-Dichloroethane	U	0.17	1.0								
1,2-Dichloropropane	U	0.25	1.0								
1,3-Dichlorobenzene	U	0.29	1.0								
1,4-Dichlorobenzene	U	0.21	1.0								
2-Butanone	U	0.58	5.0								
2-Hexanone	U	0.13	5.0								
4-Methyl-2-pentanone	U	0.11	1.0								
Acetone	U	0.92	10								
Benzene	U	0.3	1.0								
Bromodichloromethane	U	0.23	1.0								
Bromoform	U	0.77	1.0								
Bromomethane	U	0.38	1.0								
Carbon disulfide	U	0.23	1.0								
Carbon tetrachloride	U	0.31	1.0								
Chlorobenzene	U	0.27	1.0								
Chloroethane	U	0.29	1.0								
Chloroform	U	0.26	1.0								
Chloromethane	U	0.17	1.0								
cis-1,2-Dichloroethene	U	0.25	1.0								
cis-1,3-Dichloropropene	U	0.39	1.0								
Cyclohexane	U	0.22	1.0								
Dibromochloromethane	U	0.38	1.0								
Dichlorodifluoromethane	U	0.13	1.0								
Ethylbenzene	U	0.4	1.0								
Isopropylbenzene	U	0.31	1.0								
Methyl acetate	U	0.23	2.0								
Methyl tert-butyl ether	U	0.12	1.0								
Methylcyclohexane	U	0.27	1.0								
Methylene chloride	U	0.56	5.0								
Styrene	U	0.24	1.0								
Tetrachloroethene	U	0.27	1.0								
Toluene	U	0.37	1.0								
trans-1,2-Dichloroethene	U	0.28	1.0								

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209744		Instrument ID VMS9		Method: SW8260B	
trans-1,3-Dichloropropene	U	0.82	1.0		
Trichloroethene	U	0.3	1.0		
Trichlorofluoromethane	U	0.2	1.0		
Vinyl chloride	U	0.2	1.0		
Xylenes, Total	U	1.3	3.0		
Surr: 1,2-Dichloroethane-d4	19.81	0	0	20	0 99 75-120 0
Surr: 4-Bromofluorobenzene	17.44	0	0	20	0 87.2 80-110 0
Surr: Dibromofluoromethane	18.98	0	0	20	0 94.9 85-115 0
Surr: Toluene-d8	20.06	0	0	20	0 100 85-110 0

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209744** Instrument ID **VMS9** Method: **SW8260B**

LCS		Sample ID: VLCSW2-170413-R209744				Units: µg/L		Analysis Date: 4/14/2017 03:25 AM			
Client ID:		Run ID: VMS9_170413B				SeqNo: 4375294		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.72	0.36	1.0	20	0	98.6	75-130	0			
1,1,2,2-Tetrachloroethane	20.07	0.19	1.0	20	0	100	75-130	0			
1,1,2-Trichloroethane	19.2	0.4	1.0	20	0	96	75-125	0			
1,1-Dichloroethane	20.92	0.31	1.0	20	0	105	75-133	0			
1,1-Dichloroethene	21.65	0.28	1.0	20	0	108	70-145	0			
1,2,4-Trichlorobenzene	19.08	0.21	1.0	20	0	95.4	70-135	0			
1,2-Dibromo-3-chloropropane	16.6	0.97	1.0	20	0	83	60-130	0			
1,2-Dibromoethane	30.79	0.98	1.0	20	0	154	90-195	0			
1,2-Dichlorobenzene	19.49	0.22	1.0	20	0	97.4	70-130	0			
1,2-Dichloroethane	19.28	0.17	1.0	20	0	96.4	78-125	0			
1,2-Dichloropropane	19.59	0.25	1.0	20	0	98	75-125	0			
1,3-Dichlorobenzene	20.08	0.29	1.0	20	0	100	75-130	0			
1,4-Dichlorobenzene	19.53	0.21	1.0	20	0	97.6	75-130	0			
2-Butanone	19.99	0.58	5.0	20	0	100	55-150	0			
2-Hexanone	17.88	0.13	5.0	20	0	89.4	60-135	0			
4-Methyl-2-pentanone	18.73	0.11	1.0	20	0	93.6	77-178	0			
Acetone	18.84	0.92	10	20	0	94.2	60-160	0			
Benzene	20.69	0.3	1.0	20	0	103	85-125	0			
Bromodichloromethane	18.21	0.23	1.0	20	0	91	75-125	0			
Bromoform	16.92	0.77	1.0	20	0	84.6	60-125	0			
Bromomethane	22.67	0.38	1.0	20	0	113	30-185	0			
Carbon disulfide	22.34	0.23	1.0	20	0	112	60-165	0			
Carbon tetrachloride	19.79	0.31	1.0	20	0	99	65-140	0			
Chlorobenzene	19.58	0.27	1.0	20	0	97.9	80-120	0			
Chloroethane	20.32	0.29	1.0	20	0	102	50-140	0			
Chloroform	19.54	0.26	1.0	20	0	97.7	80-130	0			
Chloromethane	19.45	0.17	1.0	20	0	97.2	46-148	0			
cis-1,2-Dichloroethene	20.2	0.25	1.0	20	0	101	75-134	0			
cis-1,3-Dichloropropene	16.58	0.39	1.0	20	0	82.9	70-130	0			
Dibromochloromethane	15.75	0.38	1.0	20	0	78.8	60-115	0			
Dichlorodifluoromethane	22.38	0.13	1.0	20	0	112	20-120	0			
Ethylbenzene	18.45	0.4	1.0	20	0	92.2	85-125	0			
Isopropylbenzene	18.55	0.31	1.0	20	0	92.8	80-127	0			
Methyl tert-butyl ether	21.29	0.12	1.0	20	0	106	80-130	0			
Methylene chloride	21.03	0.56	5.0	20	0	105	75-140	0			
Styrene	18.68	0.24	1.0	20	0	93.4	83-137	0			
Tetrachloroethene	22.36	0.27	1.0	20	0	112	68-166	0			
Toluene	19.3	0.37	1.0	20	0	96.5	85-125	0			
trans-1,2-Dichloroethene	20.74	0.28	1.0	20	0	104	80-140	0			
trans-1,3-Dichloropropene	15.21	0.82	1.0	20	0	76	56-132	0			
Trichloroethene	20.31	0.3	1.0	20	0	102	84-130	0			
Trichlorofluoromethane	20.01	0.2	1.0	20	0	100	60-140	0			
Vinyl chloride	20.75	0.2	1.0	20	0	104	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209744		Instrument ID VMS9		Method: SW8260B					
Xylenes, Total	56.71	1.3	3.0	60	0	94.5	80-126	0	
Surr: 1,2-Dichloroethane-d4	20.17	0	0	20	0	101	75-120	0	
Surr: 4-Bromofluorobenzene	20.47	0	0	20	0	102	80-110	0	
Surr: Dibromofluoromethane	19.59	0	0	20	0	98	85-115	0	
Surr: Toluene-d8	20.17	0	0	20	0	101	85-110	0	

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209744** Instrument ID **VMS9** Method: **SW8260B**

MS Sample ID: 1704435-13A MS					Units: µg/L			Analysis Date: 4/14/2017 01:22 PM			
Client ID: WG-017360-040617-MR-013			Run ID: VMS9_170413B		SeqNo: 4375307		Prep Date:		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21.71	0.36	1.0	20	0	109	75-130	0			
1,1,2,2-Tetrachloroethane	22.56	0.19	1.0	20	0	113	75-130	0			
1,1,2-Trichloroethane	21.99	0.4	1.0	20	0	110	75-125	0			
1,1-Dichloroethane	22.62	0.31	1.0	20	0	113	75-133	0			
1,1-Dichloroethene	24.87	0.28	1.0	20	0	124	70-145	0			
1,2,4-Trichlorobenzene	17.59	0.21	1.0	20	0	88	70-135	0			
1,2-Dibromo-3-chloropropane	18.08	0.97	1.0	20	0	90.4	60-130	0			
1,2-Dibromoethane	36.02	0.98	1.0	20	0	180	90-195	0			
1,2-Dichlorobenzene	19.93	0.22	1.0	20	0	99.6	70-130	0			
1,2-Dichloroethane	20.95	0.17	1.0	20	0	105	78-125	0			
1,2-Dichloropropane	20.77	0.25	1.0	20	0	104	75-125	0			
1,3-Dichlorobenzene	21.04	0.29	1.0	20	0	105	75-130	0			
1,4-Dichlorobenzene	20.37	0.21	1.0	20	0	102	75-130	0			
2-Butanone	20.35	0.58	5.0	20	0	102	55-150	0			
2-Hexanone	17.24	0.13	5.0	20	0	86.2	60-135	0			
4-Methyl-2-pentanone	16.42	0.11	1.0	20	0	82.1	77-178	0			
Acetone	22.6	0.92	10	20	0	113	60-160	0			
Benzene	22.36	0.3	1.0	20	0	112	85-125	0			
Bromodichloromethane	19.92	0.23	1.0	20	0	99.6	75-125	0			
Bromoform	19.17	0.77	1.0	20	0	95.8	60-125	0			
Bromomethane	25.54	0.38	1.0	20	0	128	30-185	0			
Carbon disulfide	24.58	0.23	1.0	20	0	123	60-165	0			
Carbon tetrachloride	22.55	0.31	1.0	20	0	113	65-140	0			
Chlorobenzene	21.23	0.27	1.0	20	0	106	80-120	0			
Chloroethane	23.4	0.29	1.0	20	0	117	50-140	0			
Chloroform	21.89	0.26	1.0	20	0	109	80-130	0			
Chloromethane	21.02	0.17	1.0	20	0	105	46-148	0			
cis-1,2-Dichloroethene	20.77	0.25	1.0	20	0	104	75-134	0			
cis-1,3-Dichloropropene	15.22	0.39	1.0	20	0	76.1	70-130	0			
Dibromochloromethane	18.34	0.38	1.0	20	0	91.7	60-115	0			
Dichlorodifluoromethane	23.77	0.13	1.0	20	0	119	20-120	0			
Ethylbenzene	19.59	0.4	1.0	20	0	98	85-125	0			
Isopropylbenzene	19.67	0.31	1.0	20	0	98.4	80-127	0			
Methyl tert-butyl ether	19.7	0.12	1.0	20	0	98.5	80-130	0			
Methylene chloride	22.12	0.56	5.0	20	0	111	75-140	0			
Styrene	20.03	0.24	1.0	20	0	100	83-137	0			
Tetrachloroethene	27.51	0.27	1.0	20	0	138	68-166	0			
Toluene	20.32	0.37	1.0	20	0	102	85-125	0			
trans-1,2-Dichloroethene	22.23	0.28	1.0	20	0	111	80-140	0			
trans-1,3-Dichloropropene	15.12	0.82	1.0	20	0	75.6	56-132	0			
Trichloroethene	22.69	0.3	1.0	20	0	113	84-130	0			
Trichlorofluoromethane	22.62	0.2	1.0	20	0	113	60-140	0			
Vinyl chloride	22.87	0.2	1.0	20	0	114	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209744		Instrument ID VMS9		Method: SW8260B					
Xylenes, Total	59.97	1.3	3.0	60	0	100	80-126	0	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.24</i>	<i>0</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>21.56</i>	<i>0</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>108</i>	<i>80-110</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>20.2</i>	<i>0</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.68</i>	<i>0</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.4</i>	<i>85-110</i>	<i>0</i>	

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

Client: GHD Services Inc.
 Work Order: 1704435
 Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209744** Instrument ID **VMS9** Method: **SW8260B**

MSD					Sample ID: 1704435-13A MSD			Units: µg/L		Analysis Date: 4/14/2017 01:47 PM		
Client ID: WG-017360-040617-MR-013			Run ID: VMS9_170413B			SeqNo: 4375312		Prep Date:		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	21.69	0.36	1.0	20	0	108	75-130	21.71	0.0922	30		
1,1,2,2-Tetrachloroethane	21.43	0.19	1.0	20	0	107	75-130	22.56	5.14	30		
1,1,2-Trichloroethane	21.18	0.4	1.0	20	0	106	75-125	21.99	3.75	30		
1,1-Dichloroethane	22.5	0.31	1.0	20	0	112	75-133	22.62	0.532	30		
1,1-Dichloroethene	24.25	0.28	1.0	20	0	121	70-145	24.87	2.52	30		
1,2,4-Trichlorobenzene	18.04	0.21	1.0	20	0	90.2	70-135	17.59	2.53	30		
1,2-Dibromo-3-chloropropane	18.11	0.97	1.0	20	0	90.6	60-130	18.08	0.166	30		
1,2-Dibromoethane	33.3	0.98	1.0	20	0	166	90-195	36.02	7.85	30		
1,2-Dichlorobenzene	19.89	0.22	1.0	20	0	99.4	70-130	19.93	0.201	30		
1,2-Dichloroethane	20.92	0.17	1.0	20	0	105	78-125	20.95	0.143	30		
1,2-Dichloropropane	20.49	0.25	1.0	20	0	102	75-125	20.77	1.36	30		
1,3-Dichlorobenzene	20.78	0.29	1.0	20	0	104	75-130	21.04	1.24	30		
1,4-Dichlorobenzene	20.47	0.21	1.0	20	0	102	75-130	20.37	0.49	30		
2-Butanone	20.02	0.58	5.0	20	0	100	55-150	20.35	1.63	30		
2-Hexanone	17.86	0.13	5.0	20	0	89.3	60-135	17.24	3.53	30		
4-Methyl-2-pentanone	17.44	0.11	1.0	20	0	87.2	77-178	16.42	6.02	30		
Acetone	23.3	0.92	10	20	0	116	60-160	22.6	3.05	30		
Benzene	22.44	0.3	1.0	20	0	112	85-125	22.36	0.357	30		
Bromodichloromethane	20	0.23	1.0	20	0	100	75-125	19.92	0.401	30		
Bromoform	18.98	0.77	1.0	20	0	94.9	60-125	19.17	0.996	30		
Bromomethane	26.92	0.38	1.0	20	0	135	30-185	25.54	5.26	30		
Carbon disulfide	24.2	0.23	1.0	20	0	121	60-165	24.58	1.56	30		
Carbon tetrachloride	22.45	0.31	1.0	20	0	112	65-140	22.55	0.444	30		
Chlorobenzene	20.8	0.27	1.0	20	0	104	80-120	21.23	2.05	30		
Chloroethane	23.25	0.29	1.0	20	0	116	50-140	23.4	0.643	30		
Chloroform	20.68	0.26	1.0	20	0	103	80-130	21.89	5.68	30		
Chloromethane	20.33	0.17	1.0	20	0	102	46-148	21.02	3.34	30		
cis-1,2-Dichloroethene	20.49	0.25	1.0	20	0	102	75-134	20.77	1.36	30		
cis-1,3-Dichloropropene	15.24	0.39	1.0	20	0	76.2	70-130	15.22	0.131	30		
Dibromochloromethane	17.46	0.38	1.0	20	0	87.3	60-115	18.34	4.92	30		
Dichlorodifluoromethane	22.94	0.13	1.0	20	0	115	20-120	23.77	3.55	30		
Ethylbenzene	19.21	0.4	1.0	20	0	96	85-125	19.59	1.96	30		
Isopropylbenzene	19.51	0.31	1.0	20	0	97.6	80-127	19.67	0.817	30		
Methyl tert-butyl ether	19.58	0.12	1.0	20	0	97.9	80-130	19.7	0.611	30		
Methylene chloride	22.14	0.56	5.0	20	0	111	75-140	22.12	0.0904	30		
Styrene	19.39	0.24	1.0	20	0	97	83-137	20.03	3.25	30		
Tetrachloroethene	27.11	0.27	1.0	20	0	136	68-166	27.51	1.46	30		
Toluene	20.31	0.37	1.0	20	0	102	85-125	20.32	0.0492	30		
trans-1,2-Dichloroethene	22.62	0.28	1.0	20	0	113	80-140	22.23	1.74	30		
trans-1,3-Dichloropropene	14.44	0.82	1.0	20	0	72.2	56-132	15.12	4.6	30		
Trichloroethene	22.05	0.3	1.0	20	0	110	84-130	22.69	2.86	30		
Trichlorofluoromethane	22.16	0.2	1.0	20	0	111	60-140	22.62	2.05	30		
Vinyl chloride	22.46	0.2	1.0	20	0	112	50-136	22.87	1.81	30		

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

Client: GHD Services Inc.
Work Order: 1704435
Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: R209744		Instrument ID VMS9			Method: SW8260B					
Xylenes, Total	58.99	1.3	3.0	60	0	98.3	80-126	59.97	1.65	30
Surr: 1,2-Dichloroethane-d4	20.14	0	0	20	0	101	75-120	20.24	0.495	30
Surr: 4-Bromofluorobenzene	20.92	0	0	20	0	105	80-110	21.56	3.01	30
Surr: Dibromofluoromethane	20.45	0	0	20	0	102	85-115	20.2	1.23	30
Surr: Toluene-d8	19.66	0	0	20	0	98.3	85-110	19.68	0.102	30

The following samples were analyzed in this batch:

1704435-01A	1704435-02A	1704435-03A
1704435-04A	1704435-05A	1704435-06A
1704435-07A	1704435-08A	1704435-09A
1704435-10A	1704435-11A	1704435-12A
1704435-13A	1704435-14A	1704435-15A
1704435-16A	1704435-17A	1704435-18A
1704435-19A	1704435-20A	

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

Client: GHD Services Inc.
 Work Order: 1704435
 Project: Former GRMP (017360)

QC BATCH REPORT

Batch ID: **R209921a** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: VBLKW1-170417-R209921a					Units: µg/L		Analysis Date: 4/17/2017 02:55 PM				
Client ID:		Run ID: VMS5_170417A			SeqNo: 4381453		Prep Date:		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	U	0.27	1.0								
Surr: 1,2-Dichloroethane-d4	19.99	0	0	20	0	100	75-120	0			
Surr: 4-Bromofluorobenzene	19.54	0	0	20	0	97.7	80-110	0			
Surr: Dibromofluoromethane	19.46	0	0	20	0	97.3	85-115	0			
Surr: Toluene-d8	19.27	0	0	20	0	96.4	85-110	0			

LCS Sample ID: VLCSW1-170417-R209921a					Units: µg/L		Analysis Date: 4/17/2017 02:03 PM				
Client ID:		Run ID: VMS5_170417A			SeqNo: 4381452		Prep Date:		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	17.91	0.27	1.0	20	0	89.6	68-166	0			
Surr: 1,2-Dichloroethane-d4	18.76	0	0	20	0	93.8	75-120	0			
Surr: 4-Bromofluorobenzene	20.61	0	0	20	0	103	80-110	0			
Surr: Dibromofluoromethane	18.96	0	0	20	0	94.8	85-115	0			
Surr: Toluene-d8	19.71	0	0	20	0	98.6	85-110	0			

MS Sample ID: 1704435-17A MS					Units: µg/L		Analysis Date: 4/17/2017 11:30 PM				
Client ID: WG-017360-040717-MR-017		Run ID: VMS5_170417A			SeqNo: 4381461		Prep Date:		DF: 5		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	180.8	1.4	5.0	100	92.5	88.4	68-166	0			
Surr: 1,2-Dichloroethane-d4	95.55	0	0	100	0	95.6	75-120	0			
Surr: 4-Bromofluorobenzene	102.2	0	0	100	0	102	80-110	0			
Surr: Dibromofluoromethane	94.9	0	0	100	0	94.9	85-115	0			
Surr: Toluene-d8	99.25	0	0	100	0	99.2	85-110	0			

MSD Sample ID: 1704435-17A MSD					Units: µg/L		Analysis Date: 4/17/2017 11:56 PM				
Client ID: WG-017360-040717-MR-017		Run ID: VMS5_170417A			SeqNo: 4381462		Prep Date:		DF: 5		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	181	1.4	5.0	100	92.5	88.6	68-166	180.8	0.111	30	
Surr: 1,2-Dichloroethane-d4	94.6	0	0	100	0	94.6	75-120	95.55	0.999	30	
Surr: 4-Bromofluorobenzene	102.6	0	0	100	0	103	80-110	102.2	0.342	30	
Surr: Dibromofluoromethane	95.1	0	0	100	0	95.1	85-115	94.9	0.211	30	
Surr: Toluene-d8	99.75	0	0	100	0	99.8	85-110	99.25	0.503	30	

The following samples were analyzed in this batch:

1704435-17A

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



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 2 of 3

COC ID: 37133

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager: Chad Weller

ALS Work Order #: 1704435

Customer Information		Project Information		Parameter/Method Request for Analysis											
Purchase Order	017360-TO8Y17-02Y17	Project Name	GR Metal Plant	A	VOCs										
Work Order		Project Number	017360	B	MS/MSD										
Company Name	GHD	Bill To Company		C											
Send Report To	Ruth Mickle	Invoice Attn		D											
Address	GHD-Plymouth office 1496 Shelden Rd ste 200	Address		E											
City/State/Zip	Plymouth, MI 48170	City/State/Zip		F											
Phone		Phone		G											
Fax		Fax		H											
e-Mail Address		e-Mail Address		I											
				J											

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
11	WG-017360-040617-MR-01	4/6/17	1158	W	1	3	X										
12	WG- " -012		1251			3											
13	WG- " -013		1420			9		X									
14	WG- " -014		1437			3											
15	WG- " -015		1643			3											
16	WG-017360-040717-MR-016	4/7/17	1041			3											
17	WG- " -017		1127			3											
18	WG- " -018		1256			3											
19	WG- " -019		1315			3											
20	WG- " -020		1320			3											

Sampler(s) Please Print & Sign <u>Matt Ramsey</u>		Shipment Method <u>Drop off</u>		Turnaround Time in Business Days (BD) ☒ 10 BD ☐ 5 BD ☐ 8 BD ☐ 2 BD ☐ 1 BD				Results Due Date:				
Relinquished by: <u>MA</u>		Date: 4/8/17	Time: 1015	Received by: <u>[Signature]</u>		Notes: SSOH# 017360-036						
Relinquished by: <u>[Signature]</u>		Date: 4/8/17	Time: 1015	Received by (Laboratory): <u>[Signature]</u>		Cooler ID	Cooler Temp	QC Package: (Check One Box Below)				
Logged by (Laboratory): <u>NB</u>		Date: 4/10/17	Time: 850	Checked by (Laboratory): <u>[Signature]</u>			24	☐ Level II Std QC	☐ TRAP Checklist			
							SR	☐ Level III Std QC/Raw Data	☐ TRAP Level IV			
							PH3	☐ Level IV SW846/CLP	☐ Other			

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



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 3 of 3

COC ID: 37134

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager: Chad Whitton

ALS Work Order #: 1701435

Customer Information		Project Information		Parameter/Method Request for Analysis												
Purchase Order	017360-708117-02117	Project Name	GR Metal Plant	A	VOCs											
Work Order		Project Number	017360	B												
Company Name	GHD	Bill To Company		C												
Send Report To	Ruth Mizelle	Invoice Attn		D												
Address	GHD - Plymouth office 14496 Sheldon Rd ste 200	Address		E												
City/State/Zip	Plymouth, MI 48170	City/State/Zip		F												
Phone		Phone		G												
Fax		Fax		H												
e-Mail Address		e-Mail Address		I												
				J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
21	WG-017360-040717-MR-021	4/7/17	1520	W	1	3	X										
22	WG- " -022	↓	1600	↓	↓	3	↓										
3	TRIP BLANK-1	↓	-	↓	↓	1	↓										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <u>Matt Ramsey</u>		Shipment Method <u>Drop off</u>		Turnaround Time in Business Days (BD) ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD				Results Due Date:			
Relinquished by: <u>[Signature]</u>		Date: <u>4/8/17</u>	Time: <u>1015</u>	Received by: <u>[Signature]</u>		Notes: <u>SSOW # 017360-036</u>					
Relinquished by: <u>[Signature]</u>		Date: <u>4/18/17</u>	Time: <u>1015</u>	Received by (Laboratory): <u>[Signature]</u>		Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
Logged by (Laboratory): <u>MB</u>		Date: <u>4/10/17</u>	Time: <u>850</u>	Checked by (Laboratory): <u>[Signature]</u>			<u>24</u>	☐ Level II Std QC	☐ TRAP Checklist		
							<u>SR2</u>	☐ Level III Std QC/Raw Data	☐ TRAP Level IV		
							<u>ph</u>	☐ Level IV SW846/CLP			
								☐ Other			



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 3

COC ID: 37135

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager: CLW/HLW

ALS Work Order #: 1704435

Customer Information		Project Information		Parameter/Method Request for Analysis												
Purchase Order	017360-08717-02717	Project Name	GR Metal Plant	A	VOCs											
Work Order		Project Number	017360	B	Metals, Mercury											
Company Name	GHD	Bill To Company		C												
Send Report To	Ruth Mickle	Invoice Attn		D												
Address	GHD-plymouth office 14496 Sheldon Rd SE 200	Address		E												
City/State/Zip	Plymouth MI 48170	City/State/Zip		F												
Phone		Phone		G												
Fax		Fax		H												
e-Mail Address	ruth.mickle@ghd.com	e-Mail Address		I												
				J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SW-017360-040517-MR-001	4/5/17	1030	W	1	3	X										
2	SW - " -002		1035			3											
3	SW - " -003		1040			3											
4	WG - " -004		1130			3											
5	WG - " -005		1150			3											
6	WG - " -006		1315			4		X									
7	WG - " -007		1330			4		X									
8	WG - " -008		1415			3											
9	WG-017360-040617-MR-009	4/6/17	1111			3											
10	WG - " -010		1036			3											

Sampler(s) Please Print & Sign <u>Matt Ramsey</u>		Shipment Method <u>Drop off</u>		Turnaround Time in Business Days (BD) ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD				Results Due Date:			
Relinquished by: <u>Matt Ramsey</u>		Date: 4/8/17	Time: 1015	Received by: <u>[Signature]</u>		Notes: <u>SSOW # 017360-036</u>					
Relinquished by: <u>[Signature]</u>		Date: 4/8/17	Time: 1015	Received by (Laboratory): <u>[Signature]</u>		Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
Logged by (Laboratory): <u>MB</u>		Date: 4/10/17	Time: 850	Checked by (Laboratory): <u>[Signature]</u>			24	☐ Level II Std QC	☐ TRAP Checklist		
							502	☐ Level III Std QC/Raw Data	☐ TRAP Level IV		
							413	☐ Level IV SW846/CLP			
								☐ Other			

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

Sample Receipt Checklist

Client Name: **GHD - PLYMOUTH**

Date/Time Received: **08-Apr-17 10:15**

Work Order: **1704435**

Received by: **DS**

Checklist completed by Meghan Broadbent
eSignature

10-Apr-17
Date

Reviewed by: Alex Coaszar
eSignature

10-Apr-17
Date

Matrices: water

Carrier name: Client

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.4/2.4</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>4/10/2017 9:02:50 AM</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



21-Apr-2017

Jennifer Quigley
GHD Services Inc.
14496 Sheldon Road
Suite 200
Plymouth, MI 48170

Re: **Former GRMP (17360)**

Work Order: **1704842**

Dear Jennifer,

ALS Environmental received 26 samples on 14-Apr-2017 for the analyses presented in the following report.

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

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

The total number of pages in this report is 113.

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

Sincerely,

A handwritten signature in black ink that reads "Alex Csaszar".

Electronically approved by: Alex Csaszar

Alex Csaszar
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: GHD Services Inc.
Project: Former GRMP (17360)
Work Order: 1704842

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1704842-01	WG-017360-041117-MR-023	Water		4/11/2017 10:27	4/14/2017 15:15	☐
1704842-02	WG-017360-041117-MR-024	Water		4/11/2017 11:03	4/14/2017 15:15	☐
1704842-03	WG-017360-041117-MR-025	Water		4/11/2017 12:00	4/14/2017 15:15	☐
1704842-04	WG-017360-041117-MR-026	Water		4/11/2017 12:15	4/14/2017 15:15	☐
1704842-05	WG-017360-041117-MR-027	Water		4/11/2017 13:21	4/14/2017 15:15	☐
1704842-06	WG-017360-041117-MR-028	Water		4/11/2017 13:56	4/14/2017 15:15	☐
1704842-07	WG-017360-041117-MR-029	Water		4/11/2017 14:42	4/14/2017 15:15	☐
1704842-08	WG-017360-041117-MR-030	Water		4/11/2017 15:36	4/14/2017 15:15	☐
1704842-09	WG-017360-041117-MR-031	Water		4/11/2017 16:22	4/14/2017 15:15	☐
1704842-10	WG-017360-041117-MR-032	Water		4/11/2017 17:09	4/14/2017 15:15	☐
1704842-11	WG-017360-041117-MR-033	Water		4/11/2017 17:20	4/14/2017 15:15	☐
1704842-12	WG-017360-041217-MR-034	Water		4/12/2017 10:38	4/14/2017 15:15	☐
1704842-13	WG-017360-041217-MR-035	Water		4/12/2017 11:09	4/14/2017 15:15	☐
1704842-14	WG-017360-041217-MR-036	Water		4/12/2017 11:56	4/14/2017 15:15	☐
1704842-15	WG-017360-041217-MR-037	Water		4/12/2017 12:33	4/14/2017 15:15	☐
1704842-16	WG-017360-041217-MR-038	Water		4/12/2017 14:20	4/14/2017 15:15	☐
1704842-17	WG-017360-041217-MR-039	Water		4/12/2017 15:37	4/14/2017 15:15	☐
1704842-18	WG-017360-041217-MR-040	Water		4/12/2017 16:13	4/14/2017 15:15	☐
1704842-19	WG-017360-041217-MR-041	Water		4/12/2017 16:35	4/14/2017 15:15	☐
1704842-20	WG-017360-041317-MR-042	Water		4/13/2017 11:18	4/14/2017 15:15	☐
1704842-21	WG-017360-041317-MR-043	Water		4/13/2017 11:56	4/14/2017 15:15	☐
1704842-22	WG-017360-041317-MR-044	Water		4/13/2017 12:25	4/14/2017 15:15	☐
1704842-23	WG-017360-041317-MR-045	Water		4/13/2017 13:45	4/14/2017 15:15	☐
1704842-24	WG-017360-041317-MR-046	Water		4/13/2017 14:26	4/14/2017 15:15	☐
1704842-25	WG-017360-041317-MR-047	Water		4/13/2017 15:01	4/14/2017 15:15	☐
1704842-26	Trip Blank-2	Water		4/13/2017	4/14/2017 15:15	☐

Client: GHD Services Inc.
Project: Former GRMP (17360)
Work Order: 1704842

Case Narrative

Samples for the above noted Work Order were received on 04/14/2017. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

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

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

Volatile Organics:

Batch R209993, Method VOC_8260_W, Sample 1704842-08A: One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

Batch R210092a, Method VOC_8260_W, Sample 1704842-24A MSD: The RPD between the MS and MSD was outside the control limits for Bromomethane. The reported result in the parent sample should be considered estimated for this analyte.

Extractable Organics:

Batch 100726, Method SVO_8270_W, Sample 1704842-20B: Surrogate high due to matrix interference. Phenol-d6.

Batch 100726, Method SVO_8270_W, Samples 1704842-24B MS and MSD: The MS and MSD recoveries were below the lower control limits for 3,3'-Dichlorobenzidine. The reported result in the parent sample may be biased low for this analyte.

Metals:

No other deviations or anomalies were noted.

Client: GHD Services Inc.
Project: Former GRMP (17360)
WorkOrder: 1704842

QUALIFIERS, ACRONYMS, UNITS

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

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

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-023
Collection Date: 4/11/2017 10:27 AM

Work Order: 1704842
Lab ID: 1704842-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 06:25
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 06:25
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 06:25
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 06:25
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 06:25
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 06:25
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 06:25
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 06:25
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 06:25
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 06:25
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 06:25
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 06:25
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 06:25
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 06:25
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 06:25
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 06:25
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 06:25
Acetone	2.4	J	0.92	50	µg/L	1	4/18/2017 06:25
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 06:25
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 06:25
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 06:25
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 06:25
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 06:25
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 06:25
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 06:25
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 06:25
Chloroform	9.9		0.26	1.0	µg/L	1	4/18/2017 06:25
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 06:25
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 06:25
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 06:25
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 06:25
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 06:25
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 06:25
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 06:25
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 06:25
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 06:25
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 06:25
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 06:25

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-023
Collection Date: 4/11/2017 10:27 AM

Work Order: 1704842
Lab ID: 1704842-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 06:25
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 06:25
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 06:25
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 06:25
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 06:25
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 06:25
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 06:25
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 06:25
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 06:25
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 06:25
Surr: 1,2-Dichloroethane-d4	111			75-120	%REC	1	4/18/2017 06:25
Surr: 4-Bromofluorobenzene	89.4			80-110	%REC	1	4/18/2017 06:25
Surr: Dibromofluoromethane	106			85-115	%REC	1	4/18/2017 06:25
Surr: Toluene-d8	96.8			85-110	%REC	1	4/18/2017 06:25

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-024
Collection Date: 4/11/2017 11:03 AM

Work Order: 1704842
Lab ID: 1704842-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 06:49
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 06:49
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 06:49
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 06:49
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 06:49
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 06:49
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 06:49
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 06:49
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 06:49
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 06:49
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 06:49
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 06:49
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 06:49
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 06:49
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 06:49
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 06:49
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 06:49
Acetone	1.5	J	0.92	50	µg/L	1	4/18/2017 06:49
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 06:49
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 06:49
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 06:49
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 06:49
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 06:49
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 06:49
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 06:49
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 06:49
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 06:49
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 06:49
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 06:49
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 06:49
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 06:49
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 06:49
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 06:49
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 06:49
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 06:49
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 06:49
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 06:49
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 06:49

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-024
Collection Date: 4/11/2017 11:03 AM

Work Order: 1704842
Lab ID: 1704842-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 06:49
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 06:49
Tetrachloroethene	3.6		0.27	1.0	µg/L	1	4/18/2017 06:49
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 06:49
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 06:49
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 06:49
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 06:49
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 06:49
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 06:49
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 06:49
Surr: 1,2-Dichloroethane-d4	110			75-120	%REC	1	4/18/2017 06:49
Surr: 4-Bromofluorobenzene	89.6			80-110	%REC	1	4/18/2017 06:49
Surr: Dibromofluoromethane	104			85-115	%REC	1	4/18/2017 06:49
Surr: Toluene-d8	97.8			85-110	%REC	1	4/18/2017 06:49

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-025
Collection Date: 4/11/2017 12:00 PM

Work Order: 1704842
Lab ID: 1704842-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 07:13
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 07:13
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 07:13
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 07:13
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 07:13
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 07:13
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 07:13
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 07:13
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 07:13
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 07:13
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 07:13
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 07:13
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 07:13
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 07:13
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 07:13
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 07:13
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 07:13
Acetone	U		0.92	50	µg/L	1	4/18/2017 07:13
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 07:13
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 07:13
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 07:13
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 07:13
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 07:13
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 07:13
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 07:13
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 07:13
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 07:13
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 07:13
cis-1,2-Dichloroethene	3.5		0.25	1.0	µg/L	1	4/18/2017 07:13
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 07:13
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 07:13
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 07:13
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 07:13
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 07:13
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 07:13
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 07:13
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 07:13
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 07:13

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-025
Collection Date: 4/11/2017 12:00 PM

Work Order: 1704842
Lab ID: 1704842-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 07:13
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 07:13
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 07:13
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 07:13
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 07:13
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 07:13
Trichloroethene	1.8		0.30	1.0	µg/L	1	4/18/2017 07:13
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 07:13
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 07:13
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 07:13
Surr: 1,2-Dichloroethane-d4	110			75-120	%REC	1	4/18/2017 07:13
Surr: 4-Bromofluorobenzene	89.4			80-110	%REC	1	4/18/2017 07:13
Surr: Dibromofluoromethane	106			85-115	%REC	1	4/18/2017 07:13
Surr: Toluene-d8	96.0			85-110	%REC	1	4/18/2017 07:13

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-026
Collection Date: 4/11/2017 12:15 PM

Work Order: 1704842
Lab ID: 1704842-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 07:36
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 07:36
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 07:36
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 07:36
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 07:36
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 07:36
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 07:36
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 07:36
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 07:36
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 07:36
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 07:36
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 07:36
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 07:36
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 07:36
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 07:36
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 07:36
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 07:36
Acetone	2.6	J	0.92	50	µg/L	1	4/18/2017 07:36
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 07:36
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 07:36
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 07:36
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 07:36
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 07:36
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 07:36
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 07:36
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 07:36
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 07:36
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 07:36
cis-1,2-Dichloroethene	3.5		0.25	1.0	µg/L	1	4/18/2017 07:36
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 07:36
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 07:36
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 07:36
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 07:36
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 07:36
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 07:36
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 07:36
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 07:36
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 07:36

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-026
Collection Date: 4/11/2017 12:15 PM

Work Order: 1704842
Lab ID: 1704842-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 07:36
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 07:36
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 07:36
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 07:36
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 07:36
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 07:36
Trichloroethene	1.6		0.30	1.0	µg/L	1	4/18/2017 07:36
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 07:36
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 07:36
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 07:36
Surr: 1,2-Dichloroethane-d4	111			75-120	%REC	1	4/18/2017 07:36
Surr: 4-Bromofluorobenzene	90.4			80-110	%REC	1	4/18/2017 07:36
Surr: Dibromofluoromethane	107			85-115	%REC	1	4/18/2017 07:36
Surr: Toluene-d8	95.5			85-110	%REC	1	4/18/2017 07:36

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-027
Collection Date: 4/11/2017 01:21 PM

Work Order: 1704842
Lab ID: 1704842-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 08:00
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 08:00
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 08:00
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 08:00
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 08:00
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 08:00
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 08:00
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 08:00
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 08:00
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 08:00
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 08:00
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 08:00
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 08:00
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 08:00
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 08:00
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 08:00
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 08:00
Acetone	U		0.92	50	µg/L	1	4/18/2017 08:00
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 08:00
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 08:00
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 08:00
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 08:00
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 08:00
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 08:00
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 08:00
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 08:00
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 08:00
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 08:00
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 08:00
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 08:00
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 08:00
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 08:00
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 08:00
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 08:00
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 08:00
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 08:00
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 08:00
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 08:00

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-027
Collection Date: 4/11/2017 01:21 PM

Work Order: 1704842
Lab ID: 1704842-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 08:00
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 08:00
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 08:00
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 08:00
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 08:00
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 08:00
Trichloroethene	25		0.30	1.0	µg/L	1	4/18/2017 08:00
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 08:00
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 08:00
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 08:00
Surr: 1,2-Dichloroethane-d4	110			75-120	%REC	1	4/18/2017 08:00
Surr: 4-Bromofluorobenzene	88.5			80-110	%REC	1	4/18/2017 08:00
Surr: Dibromofluoromethane	106			85-115	%REC	1	4/18/2017 08:00
Surr: Toluene-d8	95.3			85-110	%REC	1	4/18/2017 08:00

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-028
Collection Date: 4/11/2017 01:56 PM

Work Order: 1704842
Lab ID: 1704842-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 12:58
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 12:58
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 12:58
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 12:58
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 12:58
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 12:58
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 12:58
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 12:58
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 12:58
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 12:58
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 12:58
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 12:58
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 12:58
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 12:58
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 12:58
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 12:58
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 12:58
Acetone	U		0.92	50	µg/L	1	4/18/2017 12:58
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 12:58
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 12:58
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 12:58
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 12:58
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 12:58
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 12:58
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 12:58
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 12:58
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 12:58
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 12:58
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 12:58
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 12:58
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 12:58
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 12:58
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 12:58
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 12:58
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 12:58
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 12:58
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 12:58
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 12:58

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-028
Collection Date: 4/11/2017 01:56 PM

Work Order: 1704842
Lab ID: 1704842-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 12:58
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 12:58
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 12:58
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 12:58
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 12:58
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 12:58
Trichloroethene	2.3		0.30	1.0	µg/L	1	4/18/2017 12:58
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 12:58
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 12:58
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 12:58
Surr: 1,2-Dichloroethane-d4	103			75-120	%REC	1	4/18/2017 12:58
Surr: 4-Bromofluorobenzene	97.8			80-110	%REC	1	4/18/2017 12:58
Surr: Dibromofluoromethane	98.3			85-115	%REC	1	4/18/2017 12:58
Surr: Toluene-d8	96.8			85-110	%REC	1	4/18/2017 12:58

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-029
Collection Date: 4/11/2017 02:42 PM

Work Order: 1704842
Lab ID: 1704842-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 13:19
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 13:19
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 13:19
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 13:19
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 13:19
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 13:19
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 13:19
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 13:19
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 13:19
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 13:19
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 13:19
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 13:19
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 13:19
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 13:19
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 13:19
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 13:19
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 13:19
Acetone	U		0.92	50	µg/L	1	4/18/2017 13:19
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 13:19
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 13:19
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 13:19
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 13:19
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 13:19
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 13:19
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 13:19
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 13:19
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 13:19
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 13:19
cis-1,2-Dichloroethene	2.2		0.25	1.0	µg/L	1	4/18/2017 13:19
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 13:19
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 13:19
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 13:19
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 13:19
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 13:19
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 13:19
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 13:19
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 13:19
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 13:19

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-029
Collection Date: 4/11/2017 02:42 PM

Work Order: 1704842
Lab ID: 1704842-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 13:19
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 13:19
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 13:19
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 13:19
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 13:19
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 13:19
Trichloroethene	4.1		0.30	1.0	µg/L	1	4/18/2017 13:19
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 13:19
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 13:19
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 13:19
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/18/2017 13:19
Surr: 4-Bromofluorobenzene	96.4			80-110	%REC	1	4/18/2017 13:19
Surr: Dibromofluoromethane	92.0			85-115	%REC	1	4/18/2017 13:19
Surr: Toluene-d8	98.1			85-110	%REC	1	4/18/2017 13:19

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-030
Collection Date: 4/11/2017 03:36 PM

Work Order: 1704842
Lab ID: 1704842-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 13:40
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 13:40
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 13:40
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 13:40
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 13:40
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 13:40
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 13:40
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 13:40
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 13:40
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 13:40
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 13:40
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 13:40
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 13:40
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 13:40
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 13:40
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 13:40
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 13:40
Acetone	U		0.92	50	µg/L	1	4/18/2017 13:40
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 13:40
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 13:40
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 13:40
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 13:40
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 13:40
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 13:40
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 13:40
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 13:40
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 13:40
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 13:40
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 13:40
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 13:40
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 13:40
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 13:40
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 13:40
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 13:40
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 13:40
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 13:40
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 13:40
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 13:40

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-030
Collection Date: 4/11/2017 03:36 PM

Work Order: 1704842
Lab ID: 1704842-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 13:40
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 13:40
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 13:40
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 13:40
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 13:40
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 13:40
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 13:40
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 13:40
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 13:40
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 13:40
Surr: 1,2-Dichloroethane-d4	123	S		75-120	%REC	1	4/18/2017 13:40
Surr: 4-Bromofluorobenzene	100			80-110	%REC	1	4/18/2017 13:40
Surr: Dibromofluoromethane	112			85-115	%REC	1	4/18/2017 13:40
Surr: Toluene-d8	99.3			85-110	%REC	1	4/18/2017 13:40

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-031
Collection Date: 4/11/2017 04:22 PM

Work Order: 1704842
Lab ID: 1704842-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 14:02
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 14:02
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 14:02
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 14:02
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 14:02
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 14:02
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 14:02
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 14:02
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 14:02
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 14:02
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 14:02
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 14:02
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 14:02
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 14:02
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 14:02
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 14:02
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 14:02
Acetone	U		0.92	50	µg/L	1	4/18/2017 14:02
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 14:02
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 14:02
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 14:02
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 14:02
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 14:02
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 14:02
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 14:02
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 14:02
Chloroform	1.1		0.26	1.0	µg/L	1	4/18/2017 14:02
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 14:02
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 14:02
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 14:02
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 14:02
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 14:02
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 14:02
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 14:02
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 14:02
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 14:02
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 14:02
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 14:02

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-031
Collection Date: 4/11/2017 04:22 PM

Work Order: 1704842
Lab ID: 1704842-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 14:02
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 14:02
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 14:02
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 14:02
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 14:02
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 14:02
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 14:02
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 14:02
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 14:02
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 14:02
Surr: 1,2-Dichloroethane-d4	100			75-120	%REC	1	4/18/2017 14:02
Surr: 4-Bromofluorobenzene	96.8			80-110	%REC	1	4/18/2017 14:02
Surr: Dibromofluoromethane	94.2			85-115	%REC	1	4/18/2017 14:02
Surr: Toluene-d8	98.0			85-110	%REC	1	4/18/2017 14:02

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-032
Collection Date: 4/11/2017 05:09 PM

Work Order: 1704842
Lab ID: 1704842-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			Method: SW7470A		Prep: SW7470 / 4/19/17		Analyst: JJB
Mercury	U		0.000019	0.00020	mg/L	1	4/19/2017 18:00
METALS BY ICP-MS			Method: SW6020A		Prep: SW3005A / 4/18/17		Analyst: JF
Antimony	U		0.00017	0.0020	mg/L	1	4/18/2017 22:14
Arsenic	U		0.00087	0.0050	mg/L	1	4/18/2017 22:14
Barium	0.016	J	0.0022	0.10	mg/L	1	4/18/2017 22:14
Beryllium	U		0.00012	0.0010	mg/L	1	4/18/2017 22:14
Cadmium	U		0.000050	0.0010	mg/L	1	4/18/2017 22:14
Chromium	0.0051	J	0.00065	0.010	mg/L	1	4/18/2017 22:14
Cobalt	0.00059	J	0.00014	0.020	mg/L	1	4/18/2017 22:14
Copper	0.0016	J	0.00028	0.0040	mg/L	1	4/18/2017 22:14
Iron	0.044	J	0.0046	0.20	mg/L	1	4/18/2017 22:14
Lead	U		0.00033	0.0030	mg/L	1	4/18/2017 22:14
Manganese	0.0036	J	0.00051	0.050	mg/L	1	4/18/2017 22:14
Molybdenum	0.0045	J	0.00031	0.050	mg/L	1	4/18/2017 22:14
Nickel	0.00076	J	0.00041	0.020	mg/L	1	4/18/2017 22:14
Selenium	0.0012	J	0.00090	0.0050	mg/L	1	4/18/2017 22:14
Silver	U		0.000050	0.00020	mg/L	1	4/18/2017 22:14
Thallium	U		0.00016	0.0020	mg/L	1	4/18/2017 22:14
Vanadium	U		0.00098	0.0040	mg/L	1	4/18/2017 22:14
Zinc	0.0030	J	0.0014	0.050	mg/L	1	4/18/2017 22:14
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: EMR
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 14:23
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 14:23
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 14:23
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 14:23
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 14:23
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 14:23
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 14:23
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 14:23
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 14:23
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 14:23
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 14:23
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 14:23
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 14:23
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 14:23
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 14:23
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 14:23

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-032
Collection Date: 4/11/2017 05:09 PM

Work Order: 1704842
Lab ID: 1704842-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 14:23
Acetone	U		0.92	50	µg/L	1	4/18/2017 14:23
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 14:23
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 14:23
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 14:23
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 14:23
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 14:23
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 14:23
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 14:23
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 14:23
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 14:23
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 14:23
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 14:23
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 14:23
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 14:23
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 14:23
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 14:23
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 14:23
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 14:23
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 14:23
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 14:23
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 14:23
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 14:23
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 14:23
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 14:23
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 14:23
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 14:23
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 14:23
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 14:23
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 14:23
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 14:23
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 14:23
Surr: 1,2-Dichloroethane-d4	98.8			75-120	%REC	1	4/18/2017 14:23
Surr: 4-Bromofluorobenzene	99.6			80-110	%REC	1	4/18/2017 14:23
Surr: Dibromofluoromethane	99.0			85-115	%REC	1	4/18/2017 14:23
Surr: Toluene-d8	101			85-110	%REC	1	4/18/2017 14:23

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-033
Collection Date: 4/11/2017 05:20 PM

Work Order: 1704842
Lab ID: 1704842-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			Method: SW7470A			Prep: SW7470 / 4/19/17	Analyst: JJB
Mercury	U		0.000019	0.00020	mg/L	1	4/19/2017 18:03
METALS BY ICP-MS							
			Method: SW6020A			Prep: SW3005A / 4/18/17	Analyst: JF
Antimony	U		0.00017	0.0020	mg/L	1	4/18/2017 22:20
Arsenic	U		0.00087	0.0050	mg/L	1	4/18/2017 22:20
Barium	0.017	J	0.0022	0.10	mg/L	1	4/18/2017 22:20
Beryllium	U		0.00012	0.0010	mg/L	1	4/18/2017 22:20
Cadmium	0.000091	J	0.000050	0.0010	mg/L	1	4/18/2017 22:20
Chromium	0.0050	J	0.00065	0.010	mg/L	1	4/18/2017 22:20
Cobalt	0.00060	J	0.00014	0.020	mg/L	1	4/18/2017 22:20
Copper	0.0018	J	0.00028	0.0040	mg/L	1	4/18/2017 22:20
Iron	0.046	J	0.0046	0.20	mg/L	1	4/18/2017 22:20
Lead	U		0.00033	0.0030	mg/L	1	4/18/2017 22:20
Manganese	0.0034	J	0.00051	0.050	mg/L	1	4/18/2017 22:20
Molybdenum	0.0046	J	0.00031	0.050	mg/L	1	4/18/2017 22:20
Nickel	0.00073	J	0.00041	0.020	mg/L	1	4/18/2017 22:20
Selenium	0.0010	J	0.00090	0.0050	mg/L	1	4/18/2017 22:20
Silver	U		0.000050	0.00020	mg/L	1	4/18/2017 22:20
Thallium	U		0.00016	0.0020	mg/L	1	4/18/2017 22:20
Vanadium	U		0.00098	0.0040	mg/L	1	4/18/2017 22:20
Zinc	0.0040	J	0.0014	0.050	mg/L	1	4/18/2017 22:20
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: EMR
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 14:44
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 14:44
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 14:44
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 14:44
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 14:44
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 14:44
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 14:44
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 14:44
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 14:44
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 14:44
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 14:44
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 14:44
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 14:44
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 14:44
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 14:44
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 14:44

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041117-MR-033
Collection Date: 4/11/2017 05:20 PM

Work Order: 1704842
Lab ID: 1704842-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 14:44
Acetone	U		0.92	50	µg/L	1	4/18/2017 14:44
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 14:44
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 14:44
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 14:44
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 14:44
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 14:44
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 14:44
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 14:44
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 14:44
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 14:44
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 14:44
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 14:44
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 14:44
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 14:44
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 14:44
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 14:44
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 14:44
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 14:44
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 14:44
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 14:44
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 14:44
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 14:44
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 14:44
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 14:44
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 14:44
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 14:44
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 14:44
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 14:44
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 14:44
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 14:44
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 14:44
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	1	4/18/2017 14:44
Surr: 4-Bromofluorobenzene	97.8			80-110	%REC	1	4/18/2017 14:44
Surr: Dibromofluoromethane	95.0			85-115	%REC	1	4/18/2017 14:44
Surr: Toluene-d8	98.2			85-110	%REC	1	4/18/2017 14:44

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-034
Collection Date: 4/12/2017 10:38 AM

Work Order: 1704842
Lab ID: 1704842-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 15:05
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 15:05
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 15:05
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 15:05
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 15:05
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 15:05
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 15:05
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 15:05
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 15:05
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 15:05
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 15:05
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 15:05
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 15:05
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 15:05
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 15:05
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 15:05
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 15:05
Acetone	U		0.92	50	µg/L	1	4/18/2017 15:05
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 15:05
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 15:05
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 15:05
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 15:05
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 15:05
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 15:05
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 15:05
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 15:05
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 15:05
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 15:05
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 15:05
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 15:05
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 15:05
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 15:05
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 15:05
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 15:05
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 15:05
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 15:05
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 15:05
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 15:05

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-034
Collection Date: 4/12/2017 10:38 AM

Work Order: 1704842
Lab ID: 1704842-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 15:05
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 15:05
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 15:05
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 15:05
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 15:05
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 15:05
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 15:05
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 15:05
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 15:05
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 15:05
Surr: 1,2-Dichloroethane-d4	99.4			75-120	%REC	1	4/18/2017 15:05
Surr: 4-Bromofluorobenzene	99.0			80-110	%REC	1	4/18/2017 15:05
Surr: Dibromofluoromethane	95.2			85-115	%REC	1	4/18/2017 15:05
Surr: Toluene-d8	98.9			85-110	%REC	1	4/18/2017 15:05

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-035
Collection Date: 4/12/2017 11:09 AM

Work Order: 1704842
Lab ID: 1704842-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 15:27
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 15:27
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 15:27
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 15:27
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 15:27
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 15:27
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 15:27
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 15:27
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 15:27
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 15:27
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 15:27
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 15:27
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 15:27
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 15:27
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 15:27
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 15:27
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 15:27
Acetone	2.4	J	0.92	50	µg/L	1	4/18/2017 15:27
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 15:27
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 15:27
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 15:27
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 15:27
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 15:27
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 15:27
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 15:27
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 15:27
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 15:27
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 15:27
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 15:27
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 15:27
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 15:27
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 15:27
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 15:27
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 15:27
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 15:27
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 15:27
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 15:27
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 15:27

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-035
Collection Date: 4/12/2017 11:09 AM

Work Order: 1704842
Lab ID: 1704842-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 15:27
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 15:27
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 15:27
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 15:27
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 15:27
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 15:27
Trichloroethene	12		0.30	1.0	µg/L	1	4/18/2017 15:27
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 15:27
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 15:27
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 15:27
Surr: 1,2-Dichloroethane-d4	103			75-120	%REC	1	4/18/2017 15:27
Surr: 4-Bromofluorobenzene	96.4			80-110	%REC	1	4/18/2017 15:27
Surr: Dibromofluoromethane	96.0			85-115	%REC	1	4/18/2017 15:27
Surr: Toluene-d8	99.3			85-110	%REC	1	4/18/2017 15:27

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-036
Collection Date: 4/12/2017 11:56 AM

Work Order: 1704842
Lab ID: 1704842-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 15:48
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 15:48
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 15:48
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 15:48
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 15:48
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 15:48
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 15:48
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 15:48
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 15:48
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 15:48
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 15:48
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 15:48
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 15:48
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 15:48
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 15:48
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 15:48
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 15:48
Acetone	U		0.92	50	µg/L	1	4/18/2017 15:48
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 15:48
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 15:48
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 15:48
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 15:48
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 15:48
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 15:48
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 15:48
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 15:48
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 15:48
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 15:48
cis-1,2-Dichloroethene	0.97	J	0.25	1.0	µg/L	1	4/18/2017 15:48
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 15:48
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 15:48
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 15:48
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 15:48
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 15:48
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 15:48
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 15:48
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 15:48
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 15:48

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-036
Collection Date: 4/12/2017 11:56 AM

Work Order: 1704842
Lab ID: 1704842-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 15:48
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 15:48
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 15:48
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 15:48
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 15:48
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 15:48
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 15:48
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 15:48
Vinyl chloride	3.2		0.20	1.0	µg/L	1	4/18/2017 15:48
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 15:48
Surr: 1,2-Dichloroethane-d4	99.1			75-120	%REC	1	4/18/2017 15:48
Surr: 4-Bromofluorobenzene	100			80-110	%REC	1	4/18/2017 15:48
Surr: Dibromofluoromethane	91.6			85-115	%REC	1	4/18/2017 15:48
Surr: Toluene-d8	99.8			85-110	%REC	1	4/18/2017 15:48

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-037
Collection Date: 4/12/2017 12:33 PM

Work Order: 1704842
Lab ID: 1704842-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 16:09
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 16:09
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 16:09
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 16:09
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 16:09
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 16:09
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 16:09
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 16:09
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 16:09
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 16:09
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 16:09
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 16:09
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 16:09
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 16:09
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 16:09
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 16:09
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 16:09
Acetone	U		0.92	50	µg/L	1	4/18/2017 16:09
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 16:09
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 16:09
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 16:09
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 16:09
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 16:09
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 16:09
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 16:09
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 16:09
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 16:09
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 16:09
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 16:09
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 16:09
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 16:09
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 16:09
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 16:09
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 16:09
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 16:09
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 16:09
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 16:09
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 16:09

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-037
Collection Date: 4/12/2017 12:33 PM

Work Order: 1704842
Lab ID: 1704842-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 16:09
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 16:09
Tetrachloroethene	2.6		0.27	1.0	µg/L	1	4/18/2017 16:09
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 16:09
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 16:09
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 16:09
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 16:09
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 16:09
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 16:09
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 16:09
Surr: 1,2-Dichloroethane-d4	108			75-120	%REC	1	4/18/2017 16:09
Surr: 4-Bromofluorobenzene	97.6			80-110	%REC	1	4/18/2017 16:09
Surr: Dibromofluoromethane	94.6			85-115	%REC	1	4/18/2017 16:09
Surr: Toluene-d8	102			85-110	%REC	1	4/18/2017 16:09

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-038
Collection Date: 4/12/2017 02:20 PM

Work Order: 1704842
Lab ID: 1704842-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 16:30
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 16:30
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 16:30
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 16:30
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 16:30
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 16:30
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 16:30
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 16:30
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 16:30
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 16:30
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 16:30
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 16:30
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 16:30
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 16:30
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 16:30
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 16:30
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 16:30
Acetone	U		0.92	50	µg/L	1	4/18/2017 16:30
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 16:30
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 16:30
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 16:30
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 16:30
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 16:30
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 16:30
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 16:30
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 16:30
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 16:30
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 16:30
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 16:30
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 16:30
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 16:30
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 16:30
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 16:30
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 16:30
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 16:30
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 16:30
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 16:30
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 16:30

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-038
Collection Date: 4/12/2017 02:20 PM

Work Order: 1704842
Lab ID: 1704842-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 16:30
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 16:30
Tetrachloroethene	190		1.4	5.0	µg/L	5	4/19/2017 18:56
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 16:30
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 16:30
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 16:30
Trichloroethene	3.0		0.30	1.0	µg/L	1	4/18/2017 16:30
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 16:30
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 16:30
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 16:30
Surr: 1,2-Dichloroethane-d4	99.4			75-120	%REC	1	4/18/2017 16:30
Surr: 1,2-Dichloroethane-d4	104			75-120	%REC	5	4/19/2017 18:56
Surr: 4-Bromofluorobenzene	99.7			80-110	%REC	1	4/18/2017 16:30
Surr: 4-Bromofluorobenzene	99.7			80-110	%REC	5	4/19/2017 18:56
Surr: Dibromofluoromethane	96.0			85-115	%REC	1	4/18/2017 16:30
Surr: Dibromofluoromethane	101			85-115	%REC	5	4/19/2017 18:56
Surr: Toluene-d8	99.3			85-110	%REC	1	4/18/2017 16:30
Surr: Toluene-d8	99.5			85-110	%REC	5	4/19/2017 18:56

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-039
Collection Date: 4/12/2017 03:37 PM

Work Order: 1704842
Lab ID: 1704842-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 16:51
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 16:51
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 16:51
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 16:51
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 16:51
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 16:51
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 16:51
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 16:51
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 16:51
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 16:51
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 16:51
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 16:51
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 16:51
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 16:51
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 16:51
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 16:51
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 16:51
Acetone	U		0.92	50	µg/L	1	4/18/2017 16:51
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 16:51
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 16:51
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 16:51
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 16:51
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 16:51
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 16:51
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 16:51
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 16:51
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 16:51
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 16:51
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 16:51
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 16:51
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 16:51
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 16:51
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 16:51
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 16:51
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 16:51
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 16:51
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 16:51
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 16:51

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-039
Collection Date: 4/12/2017 03:37 PM

Work Order: 1704842
Lab ID: 1704842-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 16:51
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 16:51
Tetrachloroethene	4.0		0.27	1.0	µg/L	1	4/18/2017 16:51
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 16:51
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 16:51
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 16:51
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 16:51
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 16:51
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 16:51
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 16:51
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/18/2017 16:51
Surr: 4-Bromofluorobenzene	96.8			80-110	%REC	1	4/18/2017 16:51
Surr: Dibromofluoromethane	94.0			85-115	%REC	1	4/18/2017 16:51
Surr: Toluene-d8	98.7			85-110	%REC	1	4/18/2017 16:51

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-040
Collection Date: 4/12/2017 04:13 PM

Work Order: 1704842
Lab ID: 1704842-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS		Method: SW846 8270D		Prep: SW3510 / 4/18/17		Analyst: RS	
1,1'-Biphenyl	U		0.48	5.7	µg/L	1	4/19/2017 04:49
2,4,5-Trichlorophenol	U		0.19	5.7	µg/L	1	4/19/2017 04:49
2,4,6-Trichlorophenol	U		0.28	5.7	µg/L	1	4/19/2017 04:49
2,4-Dichlorophenol	U		0.40	5.7	µg/L	1	4/19/2017 04:49
2,4-Dimethylphenol	U		0.41	5.7	µg/L	1	4/19/2017 04:49
2,4-Dinitrophenol	U		0.45	5.7	µg/L	1	4/19/2017 04:49
2,4-Dinitrotoluene	U		0.48	5.7	µg/L	1	4/19/2017 04:49
2,6-Dinitrotoluene	U		0.12	5.7	µg/L	1	4/19/2017 04:49
2-Chloronaphthalene	U		0.085	5.7	µg/L	1	4/19/2017 04:49
2-Chlorophenol	U		0.26	5.7	µg/L	1	4/19/2017 04:49
2-Methylnaphthalene	U		0.074	5.7	µg/L	1	4/19/2017 04:49
2-Methylphenol	U		0.28	5.7	µg/L	1	4/19/2017 04:49
2-Nitroaniline	U		0.24	5.7	µg/L	1	4/19/2017 04:49
2-Nitrophenol	U		0.39	5.7	µg/L	1	4/19/2017 04:49
3&4-Methylphenol	U		0.24	5.7	µg/L	1	4/19/2017 04:49
3,3'-Dichlorobenzidine	U		1.8	5.7	µg/L	1	4/19/2017 04:49
3-Nitroaniline	U		0.73	5.7	µg/L	1	4/19/2017 04:49
4,6-Dinitro-2-methylphenol	U		0.31	5.7	µg/L	1	4/19/2017 04:49
4-Bromophenyl phenyl ether	U		0.38	5.7	µg/L	1	4/19/2017 04:49
4-Chloro-3-methylphenol	U		0.30	5.7	µg/L	1	4/19/2017 04:49
4-Chloroaniline	U		0.39	5.7	µg/L	1	4/19/2017 04:49
4-Chlorophenyl phenyl ether	U		0.35	5.7	µg/L	1	4/19/2017 04:49
4-Nitroaniline	U		0.65	5.7	µg/L	1	4/19/2017 04:49
4-Nitrophenol	U		0.27	5.7	µg/L	1	4/19/2017 04:49
Acenaphthene	U		0.092	5.7	µg/L	1	4/19/2017 04:49
Acenaphthylene	U		0.085	5.7	µg/L	1	4/19/2017 04:49
Acetophenone	U		0.42	1.1	µg/L	1	4/19/2017 04:49
Anthracene	U		0.032	5.7	µg/L	1	4/19/2017 04:49
Atrazine	U		0.40	1.1	µg/L	1	4/19/2017 04:49
Benzaldehyde	U		0.59	1.1	µg/L	1	4/19/2017 04:49
Benzo(a)anthracene	U		0.025	5.7	µg/L	1	4/19/2017 04:49
Benzo(a)pyrene	U		0.050	5.7	µg/L	1	4/19/2017 04:49
Benzo(b)fluoranthene	U		0.058	5.7	µg/L	1	4/19/2017 04:49
Benzo(g,h,i)perylene	U		0.034	5.7	µg/L	1	4/19/2017 04:49
Benzo(k)fluoranthene	U		0.055	5.7	µg/L	1	4/19/2017 04:49
Bis(2-chloroethoxy)methane	U		0.33	5.7	µg/L	1	4/19/2017 04:49
Bis(2-chloroethyl)ether	U		0.42	5.7	µg/L	1	4/19/2017 04:49
Bis(2-chloroisopropyl)ether	U		0.26	5.7	µg/L	1	4/19/2017 04:49

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-040
Collection Date: 4/12/2017 04:13 PM

Work Order: 1704842
Lab ID: 1704842-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.45	5.7	µg/L	1	4/19/2017 04:49
Butyl benzyl phthalate	U		0.34	5.7	µg/L	1	4/19/2017 04:49
Caprolactam	U		1.1	11	µg/L	1	4/19/2017 04:49
Carbazole	U		0.11	5.7	µg/L	1	4/19/2017 04:49
Chrysene	U		0.055	5.7	µg/L	1	4/19/2017 04:49
Dibenzo(a,h)anthracene	U		0.034	5.7	µg/L	1	4/19/2017 04:49
Dibenzofuran	U		0.26	5.7	µg/L	1	4/19/2017 04:49
Diethyl phthalate	U		0.19	5.7	µg/L	1	4/19/2017 04:49
Dimethyl phthalate	U		0.20	5.7	µg/L	1	4/19/2017 04:49
Di-n-butyl phthalate	U		0.24	5.7	µg/L	1	4/19/2017 04:49
Di-n-octyl phthalate	U		0.17	5.7	µg/L	1	4/19/2017 04:49
Fluoranthene	U		0.043	5.7	µg/L	1	4/19/2017 04:49
Fluorene	U		0.058	5.7	µg/L	1	4/19/2017 04:49
Hexachlorobenzene	U		0.50	5.7	µg/L	1	4/19/2017 04:49
Hexachlorobutadiene	U		0.32	5.7	µg/L	1	4/19/2017 04:49
Hexachlorocyclopentadiene	U		1.2	5.7	µg/L	1	4/19/2017 04:49
Hexachloroethane	U		0.24	5.7	µg/L	1	4/19/2017 04:49
Indeno(1,2,3-cd)pyrene	U		0.076	5.7	µg/L	1	4/19/2017 04:49
Isophorone	U		0.39	5.7	µg/L	1	4/19/2017 04:49
Naphthalene	U		0.076	5.7	µg/L	1	4/19/2017 04:49
Nitrobenzene	U		0.30	5.7	µg/L	1	4/19/2017 04:49
N-Nitrosodi-n-propylamine	U		0.40	5.7	µg/L	1	4/19/2017 04:49
N-Nitrosodiphenylamine	U		0.26	5.7	µg/L	1	4/19/2017 04:49
Pentachlorophenol	U		1.1	5.7	µg/L	1	4/19/2017 04:49
Phenanthrene	U		0.034	5.7	µg/L	1	4/19/2017 04:49
Phenol	U		0.24	5.7	µg/L	1	4/19/2017 04:49
Pyrene	U		0.041	5.7	µg/L	1	4/19/2017 04:49
Surr: 2,4,6-Tribromophenol	52.3			38-115	%REC	1	4/19/2017 04:49
Surr: 2-Fluorobiphenyl	50.4			32-100	%REC	1	4/19/2017 04:49
Surr: 2-Fluorophenol	36.7			22-59	%REC	1	4/19/2017 04:49
Surr: 4-Terphenyl-d14	70.3			23-112	%REC	1	4/19/2017 04:49
Surr: Nitrobenzene-d5	50.8			31-93	%REC	1	4/19/2017 04:49
Surr: Phenol-d6	26.5			13-36	%REC	1	4/19/2017 04:49
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: EMR
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 17:18
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 17:18
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 17:18
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 17:18
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 17:18

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-040
Collection Date: 4/12/2017 04:13 PM

Work Order: 1704842
Lab ID: 1704842-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 17:18
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 17:18
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 17:18
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 17:18
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 17:18
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 17:18
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 17:18
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 17:18
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 17:18
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 17:18
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 17:18
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 17:18
Acetone	U		0.92	50	µg/L	1	4/18/2017 17:18
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 17:18
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 17:18
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 17:18
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 17:18
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 17:18
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 17:18
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 17:18
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 17:18
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 17:18
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 17:18
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 17:18
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 17:18
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 17:18
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 17:18
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 17:18
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 17:18
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 17:18
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 17:18
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 17:18
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 17:18
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 17:18
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 17:18
Tetrachloroethene	5.5		0.27	1.0	µg/L	1	4/18/2017 17:18
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 17:18
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 17:18
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 17:18
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 17:18

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-040
Collection Date: 4/12/2017 04:13 PM

Work Order: 1704842
Lab ID: 1704842-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 17:18
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 17:18
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 17:18
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/18/2017 17:18
Surr: 4-Bromofluorobenzene	97.6			80-110	%REC	1	4/18/2017 17:18
Surr: Dibromofluoromethane	94.0			85-115	%REC	1	4/18/2017 17:18
Surr: Toluene-d8	101			85-110	%REC	1	4/18/2017 17:18

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-041
Collection Date: 4/12/2017 04:35 PM

Work Order: 1704842
Lab ID: 1704842-19
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D		Prep: SW3510 / 4/18/17		Analyst: RS
1,1'-Biphenyl	U		0.42	5.0	µg/L	1	4/19/2017 05:12
2,4,5-Trichlorophenol	U		0.17	5.0	µg/L	1	4/19/2017 05:12
2,4,6-Trichlorophenol	U		0.25	5.0	µg/L	1	4/19/2017 05:12
2,4-Dichlorophenol	U		0.35	5.0	µg/L	1	4/19/2017 05:12
2,4-Dimethylphenol	U		0.36	5.0	µg/L	1	4/19/2017 05:12
2,4-Dinitrophenol	U		0.40	5.0	µg/L	1	4/19/2017 05:12
2,4-Dinitrotoluene	U		0.42	5.0	µg/L	1	4/19/2017 05:12
2,6-Dinitrotoluene	U		0.11	5.0	µg/L	1	4/19/2017 05:12
2-Chloronaphthalene	U		0.075	5.0	µg/L	1	4/19/2017 05:12
2-Chlorophenol	U		0.23	5.0	µg/L	1	4/19/2017 05:12
2-Methylnaphthalene	U		0.065	5.0	µg/L	1	4/19/2017 05:12
2-Methylphenol	U		0.25	5.0	µg/L	1	4/19/2017 05:12
2-Nitroaniline	U		0.21	5.0	µg/L	1	4/19/2017 05:12
2-Nitrophenol	U		0.34	5.0	µg/L	1	4/19/2017 05:12
3&4-Methylphenol	U		0.21	5.0	µg/L	1	4/19/2017 05:12
3,3'-Dichlorobenzidine	U		1.6	5.0	µg/L	1	4/19/2017 05:12
3-Nitroaniline	U		0.64	5.0	µg/L	1	4/19/2017 05:12
4,6-Dinitro-2-methylphenol	U		0.27	5.0	µg/L	1	4/19/2017 05:12
4-Bromophenyl phenyl ether	U		0.33	5.0	µg/L	1	4/19/2017 05:12
4-Chloro-3-methylphenol	U		0.26	5.0	µg/L	1	4/19/2017 05:12
4-Chloroaniline	U		0.34	5.0	µg/L	1	4/19/2017 05:12
4-Chlorophenyl phenyl ether	U		0.31	5.0	µg/L	1	4/19/2017 05:12
4-Nitroaniline	U		0.57	5.0	µg/L	1	4/19/2017 05:12
4-Nitrophenol	U		0.24	5.0	µg/L	1	4/19/2017 05:12
Acenaphthene	U		0.081	5.0	µg/L	1	4/19/2017 05:12
Acenaphthylene	U		0.075	5.0	µg/L	1	4/19/2017 05:12
Acetophenone	U		0.37	1.0	µg/L	1	4/19/2017 05:12
Anthracene	U		0.028	5.0	µg/L	1	4/19/2017 05:12
Atrazine	U		0.35	1.0	µg/L	1	4/19/2017 05:12
Benzaldehyde	U		0.52	1.0	µg/L	1	4/19/2017 05:12
Benzo(a)anthracene	U		0.022	5.0	µg/L	1	4/19/2017 05:12
Benzo(a)pyrene	U		0.044	5.0	µg/L	1	4/19/2017 05:12
Benzo(b)fluoranthene	U		0.051	5.0	µg/L	1	4/19/2017 05:12
Benzo(g,h,i)perylene	U		0.030	5.0	µg/L	1	4/19/2017 05:12
Benzo(k)fluoranthene	U		0.048	5.0	µg/L	1	4/19/2017 05:12
Bis(2-chloroethoxy)methane	U		0.29	5.0	µg/L	1	4/19/2017 05:12
Bis(2-chloroethyl)ether	U		0.37	5.0	µg/L	1	4/19/2017 05:12
Bis(2-chloroisopropyl)ether	U		0.23	5.0	µg/L	1	4/19/2017 05:12

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-041
Collection Date: 4/12/2017 04:35 PM

Work Order: 1704842
Lab ID: 1704842-19
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.40	5.0	µg/L	1	4/19/2017 05:12
Butyl benzyl phthalate	U		0.30	5.0	µg/L	1	4/19/2017 05:12
Caprolactam	U		0.96	10	µg/L	1	4/19/2017 05:12
Carbazole	U		0.10	5.0	µg/L	1	4/19/2017 05:12
Chrysene	U		0.048	5.0	µg/L	1	4/19/2017 05:12
Dibenzo(a,h)anthracene	U		0.030	5.0	µg/L	1	4/19/2017 05:12
Dibenzofuran	U		0.23	5.0	µg/L	1	4/19/2017 05:12
Diethyl phthalate	U		0.17	5.0	µg/L	1	4/19/2017 05:12
Dimethyl phthalate	U		0.18	5.0	µg/L	1	4/19/2017 05:12
Di-n-butyl phthalate	U		0.21	5.0	µg/L	1	4/19/2017 05:12
Di-n-octyl phthalate	U		0.15	5.0	µg/L	1	4/19/2017 05:12
Fluoranthene	U		0.038	5.0	µg/L	1	4/19/2017 05:12
Fluorene	U		0.051	5.0	µg/L	1	4/19/2017 05:12
Hexachlorobenzene	U		0.44	5.0	µg/L	1	4/19/2017 05:12
Hexachlorobutadiene	U		0.28	5.0	µg/L	1	4/19/2017 05:12
Hexachlorocyclopentadiene	U		1.1	5.0	µg/L	1	4/19/2017 05:12
Hexachloroethane	U		0.21	5.0	µg/L	1	4/19/2017 05:12
Indeno(1,2,3-cd)pyrene	U		0.067	5.0	µg/L	1	4/19/2017 05:12
Isophorone	U		0.34	5.0	µg/L	1	4/19/2017 05:12
Naphthalene	U		0.067	5.0	µg/L	1	4/19/2017 05:12
Nitrobenzene	U		0.26	5.0	µg/L	1	4/19/2017 05:12
N-Nitrosodi-n-propylamine	U		0.35	5.0	µg/L	1	4/19/2017 05:12
N-Nitrosodiphenylamine	U		0.23	5.0	µg/L	1	4/19/2017 05:12
Pentachlorophenol	U		0.97	5.0	µg/L	1	4/19/2017 05:12
Phenanthrene	U		0.030	5.0	µg/L	1	4/19/2017 05:12
Phenol	U		0.21	5.0	µg/L	1	4/19/2017 05:12
Pyrene	U		0.036	5.0	µg/L	1	4/19/2017 05:12
Surr: 2,4,6-Tribromophenol	49.1			38-115	%REC	1	4/19/2017 05:12
Surr: 2-Fluorobiphenyl	47.5			32-100	%REC	1	4/19/2017 05:12
Surr: 2-Fluorophenol	35.7			22-59	%REC	1	4/19/2017 05:12
Surr: 4-Terphenyl-d14	65.3			23-112	%REC	1	4/19/2017 05:12
Surr: Nitrobenzene-d5	50.0			31-93	%REC	1	4/19/2017 05:12
Surr: Phenol-d6	25.5			13-36	%REC	1	4/19/2017 05:12
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 01:29
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 01:29
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 01:29
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 01:29
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 01:29

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-041
Collection Date: 4/12/2017 04:35 PM

Work Order: 1704842
Lab ID: 1704842-19
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 01:29
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 01:29
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 01:29
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 01:29
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 01:29
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 01:29
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 01:29
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 01:29
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 01:29
2-Butanone	U		0.58	25	µg/L	1	4/19/2017 01:29
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 01:29
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/19/2017 01:29
Acetone	U		0.92	50	µg/L	1	4/19/2017 01:29
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 01:29
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 01:29
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 01:29
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 01:29
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 01:29
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 01:29
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 01:29
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 01:29
Chloroform	0.42	J	0.26	1.0	µg/L	1	4/19/2017 01:29
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 01:29
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/19/2017 01:29
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 01:29
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 01:29
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 01:29
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 01:29
Ethylbenzene	U		0.40	1.0	µg/L	1	4/19/2017 01:29
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/19/2017 01:29
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 01:29
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 01:29
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 01:29
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 01:29
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 01:29
Tetrachloroethene	4.6		0.27	1.0	µg/L	1	4/19/2017 01:29
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 01:29
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 01:29
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 01:29
Trichloroethene	1.0		0.30	1.0	µg/L	1	4/19/2017 01:29

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041217-MR-041
Collection Date: 4/12/2017 04:35 PM

Work Order: 1704842
Lab ID: 1704842-19
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 01:29
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 01:29
Xylenes, Total	U		1.3	3.0	µg/L	1	4/19/2017 01:29
Surr: 1,2-Dichloroethane-d4	96.3			75-120	%REC	1	4/19/2017 01:29
Surr: 4-Bromofluorobenzene	97.2			80-110	%REC	1	4/19/2017 01:29
Surr: Dibromofluoromethane	97.2			85-115	%REC	1	4/19/2017 01:29
Surr: Toluene-d8	92.6			85-110	%REC	1	4/19/2017 01:29

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-042
Collection Date: 4/13/2017 11:18 AM

Work Order: 1704842
Lab ID: 1704842-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D		Prep: SW3510 / 4/18/17		Analyst: RS
1,1'-Biphenyl	U		0.45	5.4	µg/L	1	4/19/2017 05:35
2,4,5-Trichlorophenol	U		0.18	5.4	µg/L	1	4/19/2017 05:35
2,4,6-Trichlorophenol	U		0.27	5.4	µg/L	1	4/19/2017 05:35
2,4-Dichlorophenol	U		0.38	5.4	µg/L	1	4/19/2017 05:35
2,4-Dimethylphenol	U		0.39	5.4	µg/L	1	4/19/2017 05:35
2,4-Dinitrophenol	U		0.43	5.4	µg/L	1	4/19/2017 05:35
2,4-Dinitrotoluene	U		0.45	5.4	µg/L	1	4/19/2017 05:35
2,6-Dinitrotoluene	U		0.12	5.4	µg/L	1	4/19/2017 05:35
2-Chloronaphthalene	U		0.081	5.4	µg/L	1	4/19/2017 05:35
2-Chlorophenol	U		0.25	5.4	µg/L	1	4/19/2017 05:35
2-Methylnaphthalene	U		0.070	5.4	µg/L	1	4/19/2017 05:35
2-Methylphenol	U		0.27	5.4	µg/L	1	4/19/2017 05:35
2-Nitroaniline	U		0.23	5.4	µg/L	1	4/19/2017 05:35
2-Nitrophenol	U		0.37	5.4	µg/L	1	4/19/2017 05:35
3&4-Methylphenol	U		0.23	5.4	µg/L	1	4/19/2017 05:35
3,3'-Dichlorobenzidine	U		1.7	5.4	µg/L	1	4/19/2017 05:35
3-Nitroaniline	U		0.69	5.4	µg/L	1	4/19/2017 05:35
4,6-Dinitro-2-methylphenol	U		0.29	5.4	µg/L	1	4/19/2017 05:35
4-Bromophenyl phenyl ether	U		0.35	5.4	µg/L	1	4/19/2017 05:35
4-Chloro-3-methylphenol	U		0.28	5.4	µg/L	1	4/19/2017 05:35
4-Chloroaniline	U		0.37	5.4	µg/L	1	4/19/2017 05:35
4-Chlorophenyl phenyl ether	U		0.33	5.4	µg/L	1	4/19/2017 05:35
4-Nitroaniline	U		0.61	5.4	µg/L	1	4/19/2017 05:35
4-Nitrophenol	U		0.26	5.4	µg/L	1	4/19/2017 05:35
Acenaphthene	1.1	J	0.087	5.4	µg/L	1	4/19/2017 05:35
Acenaphthylene	U		0.081	5.4	µg/L	1	4/19/2017 05:35
Acetophenone	U		0.40	1.1	µg/L	1	4/19/2017 05:35
Anthracene	U		0.030	5.4	µg/L	1	4/19/2017 05:35
Atrazine	U		0.38	1.1	µg/L	1	4/19/2017 05:35
Benzaldehyde	U		0.56	1.1	µg/L	1	4/19/2017 05:35
Benzo(a)anthracene	U		0.024	5.4	µg/L	1	4/19/2017 05:35
Benzo(a)pyrene	U		0.047	5.4	µg/L	1	4/19/2017 05:35
Benzo(b)fluoranthene	U		0.055	5.4	µg/L	1	4/19/2017 05:35
Benzo(g,h,i)perylene	U		0.032	5.4	µg/L	1	4/19/2017 05:35
Benzo(k)fluoranthene	U		0.052	5.4	µg/L	1	4/19/2017 05:35
Bis(2-chloroethoxy)methane	U		0.31	5.4	µg/L	1	4/19/2017 05:35
Bis(2-chloroethyl)ether	U		0.40	5.4	µg/L	1	4/19/2017 05:35
Bis(2-chloroisopropyl)ether	U		0.25	5.4	µg/L	1	4/19/2017 05:35

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-042
Collection Date: 4/13/2017 11:18 AM

Work Order: 1704842
Lab ID: 1704842-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.43	5.4	µg/L	1	4/19/2017 05:35
Butyl benzyl phthalate	U		0.32	5.4	µg/L	1	4/19/2017 05:35
Caprolactam	U		1.0	11	µg/L	1	4/19/2017 05:35
Carbazole	2.9	J	0.11	5.4	µg/L	1	4/19/2017 05:35
Chrysene	U		0.052	5.4	µg/L	1	4/19/2017 05:35
Dibenzo(a,h)anthracene	U		0.032	5.4	µg/L	1	4/19/2017 05:35
Dibenzofuran	U		0.25	5.4	µg/L	1	4/19/2017 05:35
Diethyl phthalate	U		0.18	5.4	µg/L	1	4/19/2017 05:35
Dimethyl phthalate	U		0.19	5.4	µg/L	1	4/19/2017 05:35
Di-n-butyl phthalate	U		0.23	5.4	µg/L	1	4/19/2017 05:35
Di-n-octyl phthalate	U		0.16	5.4	µg/L	1	4/19/2017 05:35
Fluoranthene	U		0.041	5.4	µg/L	1	4/19/2017 05:35
Fluorene	3.2	J	0.055	5.4	µg/L	1	4/19/2017 05:35
Hexachlorobenzene	U		0.47	5.4	µg/L	1	4/19/2017 05:35
Hexachlorobutadiene	U		0.30	5.4	µg/L	1	4/19/2017 05:35
Hexachlorocyclopentadiene	U		1.2	5.4	µg/L	1	4/19/2017 05:35
Hexachloroethane	U		0.23	5.4	µg/L	1	4/19/2017 05:35
Indeno(1,2,3-cd)pyrene	U		0.072	5.4	µg/L	1	4/19/2017 05:35
Isophorone	U		0.37	5.4	µg/L	1	4/19/2017 05:35
Naphthalene	2.3	J	0.072	5.4	µg/L	1	4/19/2017 05:35
Nitrobenzene	U		0.28	5.4	µg/L	1	4/19/2017 05:35
N-Nitrosodi-n-propylamine	U		0.38	5.4	µg/L	1	4/19/2017 05:35
N-Nitrosodiphenylamine	U		0.25	5.4	µg/L	1	4/19/2017 05:35
Pentachlorophenol	U		1.0	5.4	µg/L	1	4/19/2017 05:35
Phenanthrene	U		0.032	5.4	µg/L	1	4/19/2017 05:35
Phenol	U		0.23	5.4	µg/L	1	4/19/2017 05:35
Pyrene	U		0.039	5.4	µg/L	1	4/19/2017 05:35
Surr: 2,4,6-Tribromophenol	75.9			38-115	%REC	1	4/19/2017 05:35
Surr: 2-Fluorobiphenyl	64.3			32-100	%REC	1	4/19/2017 05:35
Surr: 2-Fluorophenol	44.1			22-59	%REC	1	4/19/2017 05:35
Surr: 4-Terphenyl-d14	91.6			23-112	%REC	1	4/19/2017 05:35
Surr: Nitrobenzene-d5	63.0			31-93	%REC	1	4/19/2017 05:35
Surr: Phenol-d6	37.8	S		13-36	%REC	1	4/19/2017 05:35
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 01:55
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 01:55
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 01:55
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 01:55
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 01:55

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-042
Collection Date: 4/13/2017 11:18 AM

Work Order: 1704842
Lab ID: 1704842-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 01:55
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 01:55
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 01:55
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 01:55
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 01:55
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 01:55
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 01:55
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 01:55
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 01:55
2-Butanone	U		0.58	25	µg/L	1	4/19/2017 01:55
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 01:55
4-Methyl-2-pentanone	1.7	J	0.11	50	µg/L	1	4/19/2017 01:55
Acetone	6.6	J	0.92	50	µg/L	1	4/19/2017 01:55
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 01:55
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 01:55
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 01:55
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 01:55
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 01:55
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 01:55
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 01:55
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 01:55
Chloroform	U		0.26	1.0	µg/L	1	4/19/2017 01:55
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 01:55
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/19/2017 01:55
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 01:55
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 01:55
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 01:55
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 01:55
Ethylbenzene	2.9		0.40	1.0	µg/L	1	4/19/2017 01:55
Isopropylbenzene	2.1	J	0.31	5.0	µg/L	1	4/19/2017 01:55
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 01:55
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 01:55
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 01:55
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 01:55
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 01:55
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/19/2017 01:55
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 01:55
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 01:55
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 01:55
Trichloroethene	U		0.30	1.0	µg/L	1	4/19/2017 01:55

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-042
Collection Date: 4/13/2017 11:18 AM

Work Order: 1704842
Lab ID: 1704842-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 01:55
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 01:55
Xylenes, Total	4.4		1.3	3.0	µg/L	1	4/19/2017 01:55
Surr: 1,2-Dichloroethane-d4	100			75-120	%REC	1	4/19/2017 01:55
Surr: 4-Bromofluorobenzene	102			80-110	%REC	1	4/19/2017 01:55
Surr: Dibromofluoromethane	97.4			85-115	%REC	1	4/19/2017 01:55
Surr: Toluene-d8	95.7			85-110	%REC	1	4/19/2017 01:55

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-043
Collection Date: 4/13/2017 11:56 AM

Work Order: 1704842
Lab ID: 1704842-21
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D		Prep: SW3510 / 4/18/17		Analyst: RM
1,1'-Biphenyl	U		0.42	5.0	µg/L	1	4/19/2017 19:48
2,4,5-Trichlorophenol	U		0.17	5.0	µg/L	1	4/19/2017 19:48
2,4,6-Trichlorophenol	U		0.25	5.0	µg/L	1	4/19/2017 19:48
2,4-Dichlorophenol	U		0.35	5.0	µg/L	1	4/19/2017 19:48
2,4-Dimethylphenol	U		0.36	5.0	µg/L	1	4/19/2017 19:48
2,4-Dinitrophenol	U		0.40	5.0	µg/L	1	4/19/2017 19:48
2,4-Dinitrotoluene	U		0.42	5.0	µg/L	1	4/19/2017 19:48
2,6-Dinitrotoluene	U		0.11	5.0	µg/L	1	4/19/2017 19:48
2-Chloronaphthalene	U		0.075	5.0	µg/L	1	4/19/2017 19:48
2-Chlorophenol	U		0.23	5.0	µg/L	1	4/19/2017 19:48
2-Methylnaphthalene	0.18	J	0.065	5.0	µg/L	1	4/19/2017 19:48
2-Methylphenol	U		0.25	5.0	µg/L	1	4/19/2017 19:48
2-Nitroaniline	U		0.21	5.0	µg/L	1	4/19/2017 19:48
2-Nitrophenol	U		0.34	5.0	µg/L	1	4/19/2017 19:48
3&4-Methylphenol	U		0.21	5.0	µg/L	1	4/19/2017 19:48
3,3'-Dichlorobenzidine	U		1.6	5.0	µg/L	1	4/19/2017 19:48
3-Nitroaniline	U		0.64	5.0	µg/L	1	4/19/2017 19:48
4,6-Dinitro-2-methylphenol	U		0.27	5.0	µg/L	1	4/19/2017 19:48
4-Bromophenyl phenyl ether	U		0.33	5.0	µg/L	1	4/19/2017 19:48
4-Chloro-3-methylphenol	U		0.26	5.0	µg/L	1	4/19/2017 19:48
4-Chloroaniline	U		0.34	5.0	µg/L	1	4/19/2017 19:48
4-Chlorophenyl phenyl ether	U		0.31	5.0	µg/L	1	4/19/2017 19:48
4-Nitroaniline	U		0.57	5.0	µg/L	1	4/19/2017 19:48
4-Nitrophenol	U		0.24	5.0	µg/L	1	4/19/2017 19:48
Acenaphthene	0.51	J	0.081	5.0	µg/L	1	4/19/2017 19:48
Acenaphthylene	U		0.075	5.0	µg/L	1	4/19/2017 19:48
Acetophenone	U		0.37	1.0	µg/L	1	4/19/2017 19:48
Anthracene	0.23	J	0.028	5.0	µg/L	1	4/19/2017 19:48
Atrazine	U		0.35	1.0	µg/L	1	4/19/2017 19:48
Benzaldehyde	U		0.52	1.0	µg/L	1	4/19/2017 19:48
Benzo(a)anthracene	U		0.022	5.0	µg/L	1	4/19/2017 19:48
Benzo(a)pyrene	U		0.044	5.0	µg/L	1	4/19/2017 19:48
Benzo(b)fluoranthene	U		0.051	5.0	µg/L	1	4/19/2017 19:48
Benzo(g,h,i)perylene	U		0.030	5.0	µg/L	1	4/19/2017 19:48
Benzo(k)fluoranthene	U		0.048	5.0	µg/L	1	4/19/2017 19:48
Bis(2-chloroethoxy)methane	U		0.29	5.0	µg/L	1	4/19/2017 19:48
Bis(2-chloroethyl)ether	U		0.37	5.0	µg/L	1	4/19/2017 19:48
Bis(2-chloroisopropyl)ether	U		0.23	5.0	µg/L	1	4/19/2017 19:48

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-043
Collection Date: 4/13/2017 11:56 AM

Work Order: 1704842
Lab ID: 1704842-21
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.40	5.0	µg/L	1	4/19/2017 19:48
Butyl benzyl phthalate	U		0.30	5.0	µg/L	1	4/19/2017 19:48
Caprolactam	U		0.96	10	µg/L	1	4/19/2017 19:48
Carbazole	0.65	J	0.10	5.0	µg/L	1	4/19/2017 19:48
Chrysene	U		0.048	5.0	µg/L	1	4/19/2017 19:48
Dibenzo(a,h)anthracene	U		0.030	5.0	µg/L	1	4/19/2017 19:48
Dibenzofuran	0.86	J	0.23	5.0	µg/L	1	4/19/2017 19:48
Diethyl phthalate	U		0.17	5.0	µg/L	1	4/19/2017 19:48
Dimethyl phthalate	U		0.18	5.0	µg/L	1	4/19/2017 19:48
Di-n-butyl phthalate	U		0.21	5.0	µg/L	1	4/19/2017 19:48
Di-n-octyl phthalate	U		0.15	5.0	µg/L	1	4/19/2017 19:48
Fluoranthene	0.42	J	0.038	5.0	µg/L	1	4/19/2017 19:48
Fluorene	0.40	J	0.051	5.0	µg/L	1	4/19/2017 19:48
Hexachlorobenzene	U		0.44	5.0	µg/L	1	4/19/2017 19:48
Hexachlorobutadiene	U		0.28	5.0	µg/L	1	4/19/2017 19:48
Hexachlorocyclopentadiene	U		1.1	5.0	µg/L	1	4/19/2017 19:48
Hexachloroethane	U		0.21	5.0	µg/L	1	4/19/2017 19:48
Indeno(1,2,3-cd)pyrene	U		0.067	5.0	µg/L	1	4/19/2017 19:48
Isophorone	U		0.34	5.0	µg/L	1	4/19/2017 19:48
Naphthalene	0.36	J	0.067	5.0	µg/L	1	4/19/2017 19:48
Nitrobenzene	U		0.26	5.0	µg/L	1	4/19/2017 19:48
N-Nitrosodi-n-propylamine	U		0.35	5.0	µg/L	1	4/19/2017 19:48
N-Nitrosodiphenylamine	U		0.23	5.0	µg/L	1	4/19/2017 19:48
Pentachlorophenol	U		0.97	5.0	µg/L	1	4/19/2017 19:48
Phenanthrene	0.61	J	0.030	5.0	µg/L	1	4/19/2017 19:48
Phenol	U		0.21	5.0	µg/L	1	4/19/2017 19:48
Pyrene	0.23	J	0.036	5.0	µg/L	1	4/19/2017 19:48
Surr: 2,4,6-Tribromophenol	74.8			38-115	%REC	1	4/19/2017 19:48
Surr: 2-Fluorobiphenyl	74.0			32-100	%REC	1	4/19/2017 19:48
Surr: 2-Fluorophenol	45.1			22-59	%REC	1	4/19/2017 19:48
Surr: 4-Terphenyl-d14	66.1			23-112	%REC	1	4/19/2017 19:48
Surr: Nitrobenzene-d5	63.9			31-93	%REC	1	4/19/2017 19:48
Surr: Phenol-d6	21.5			13-36	%REC	1	4/19/2017 19:48
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 02:21
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 02:21
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 02:21
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 02:21
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 02:21

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-043
Collection Date: 4/13/2017 11:56 AM

Work Order: 1704842
Lab ID: 1704842-21
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 02:21
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 02:21
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 02:21
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 02:21
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 02:21
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 02:21
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 02:21
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 02:21
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 02:21
2-Butanone	U		0.58	25	µg/L	1	4/19/2017 02:21
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 02:21
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/19/2017 02:21
Acetone	3.8	J	0.92	50	µg/L	1	4/19/2017 02:21
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 02:21
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 02:21
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 02:21
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 02:21
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 02:21
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 02:21
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 02:21
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 02:21
Chloroform	U		0.26	1.0	µg/L	1	4/19/2017 02:21
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 02:21
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/19/2017 02:21
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 02:21
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 02:21
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 02:21
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 02:21
Ethylbenzene	U		0.40	1.0	µg/L	1	4/19/2017 02:21
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/19/2017 02:21
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 02:21
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 02:21
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 02:21
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 02:21
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 02:21
Tetrachloroethene	1.3		0.27	1.0	µg/L	1	4/19/2017 02:21
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 02:21
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 02:21
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 02:21
Trichloroethene	0.44	J	0.30	1.0	µg/L	1	4/19/2017 02:21

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-043
Collection Date: 4/13/2017 11:56 AM

Work Order: 1704842
Lab ID: 1704842-21
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 02:21
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 02:21
Xylenes, Total	U		1.3	3.0	µg/L	1	4/19/2017 02:21
Surr: 1,2-Dichloroethane-d4	100			75-120	%REC	1	4/19/2017 02:21
Surr: 4-Bromofluorobenzene	101			80-110	%REC	1	4/19/2017 02:21
Surr: Dibromofluoromethane	96.6			85-115	%REC	1	4/19/2017 02:21
Surr: Toluene-d8	95.8			85-110	%REC	1	4/19/2017 02:21

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-044
Collection Date: 4/13/2017 12:25 PM

Work Order: 1704842
Lab ID: 1704842-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D	Prep: SW3510 / 4/18/17		Analyst: RM	
1,1'-Biphenyl	U		0.42	5.0	µg/L	1	4/19/2017 20:08
2,4,5-Trichlorophenol	U		0.17	5.0	µg/L	1	4/19/2017 20:08
2,4,6-Trichlorophenol	U		0.25	5.0	µg/L	1	4/19/2017 20:08
2,4-Dichlorophenol	U		0.35	5.0	µg/L	1	4/19/2017 20:08
2,4-Dimethylphenol	U		0.36	5.0	µg/L	1	4/19/2017 20:08
2,4-Dinitrophenol	U		0.40	5.0	µg/L	1	4/19/2017 20:08
2,4-Dinitrotoluene	U		0.42	5.0	µg/L	1	4/19/2017 20:08
2,6-Dinitrotoluene	U		0.11	5.0	µg/L	1	4/19/2017 20:08
2-Chloronaphthalene	U		0.075	5.0	µg/L	1	4/19/2017 20:08
2-Chlorophenol	U		0.23	5.0	µg/L	1	4/19/2017 20:08
2-Methylnaphthalene	U		0.065	5.0	µg/L	1	4/19/2017 20:08
2-Methylphenol	U		0.25	5.0	µg/L	1	4/19/2017 20:08
2-Nitroaniline	U		0.21	5.0	µg/L	1	4/19/2017 20:08
2-Nitrophenol	U		0.34	5.0	µg/L	1	4/19/2017 20:08
3&4-Methylphenol	U		0.21	5.0	µg/L	1	4/19/2017 20:08
3,3'-Dichlorobenzidine	U		1.6	5.0	µg/L	1	4/19/2017 20:08
3-Nitroaniline	U		0.64	5.0	µg/L	1	4/19/2017 20:08
4,6-Dinitro-2-methylphenol	U		0.27	5.0	µg/L	1	4/19/2017 20:08
4-Bromophenyl phenyl ether	U		0.33	5.0	µg/L	1	4/19/2017 20:08
4-Chloro-3-methylphenol	U		0.26	5.0	µg/L	1	4/19/2017 20:08
4-Chloroaniline	U		0.34	5.0	µg/L	1	4/19/2017 20:08
4-Chlorophenyl phenyl ether	U		0.31	5.0	µg/L	1	4/19/2017 20:08
4-Nitroaniline	U		0.57	5.0	µg/L	1	4/19/2017 20:08
4-Nitrophenol	U		0.24	5.0	µg/L	1	4/19/2017 20:08
Acenaphthene	U		0.081	5.0	µg/L	1	4/19/2017 20:08
Acenaphthylene	U		0.075	5.0	µg/L	1	4/19/2017 20:08
Acetophenone	U		0.37	1.0	µg/L	1	4/19/2017 20:08
Anthracene	U		0.028	5.0	µg/L	1	4/19/2017 20:08
Atrazine	U		0.35	1.0	µg/L	1	4/19/2017 20:08
Benzaldehyde	U		0.52	1.0	µg/L	1	4/19/2017 20:08
Benzo(a)anthracene	U		0.022	5.0	µg/L	1	4/19/2017 20:08
Benzo(a)pyrene	U		0.044	5.0	µg/L	1	4/19/2017 20:08
Benzo(b)fluoranthene	U		0.051	5.0	µg/L	1	4/19/2017 20:08
Benzo(g,h,i)perylene	U		0.030	5.0	µg/L	1	4/19/2017 20:08
Benzo(k)fluoranthene	U		0.048	5.0	µg/L	1	4/19/2017 20:08
Bis(2-chloroethoxy)methane	U		0.29	5.0	µg/L	1	4/19/2017 20:08
Bis(2-chloroethyl)ether	U		0.37	5.0	µg/L	1	4/19/2017 20:08
Bis(2-chloroisopropyl)ether	U		0.23	5.0	µg/L	1	4/19/2017 20:08

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-044
Collection Date: 4/13/2017 12:25 PM

Work Order: 1704842
Lab ID: 1704842-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.40	5.0	µg/L	1	4/19/2017 20:08
Butyl benzyl phthalate	U		0.30	5.0	µg/L	1	4/19/2017 20:08
Caprolactam	U		0.96	10	µg/L	1	4/19/2017 20:08
Carbazole	U		0.10	5.0	µg/L	1	4/19/2017 20:08
Chrysene	U		0.048	5.0	µg/L	1	4/19/2017 20:08
Dibenzo(a,h)anthracene	U		0.030	5.0	µg/L	1	4/19/2017 20:08
Dibenzofuran	0.59	J	0.23	5.0	µg/L	1	4/19/2017 20:08
Diethyl phthalate	U		0.17	5.0	µg/L	1	4/19/2017 20:08
Dimethyl phthalate	U		0.18	5.0	µg/L	1	4/19/2017 20:08
Di-n-butyl phthalate	U		0.21	5.0	µg/L	1	4/19/2017 20:08
Di-n-octyl phthalate	U		0.15	5.0	µg/L	1	4/19/2017 20:08
Fluoranthene	U		0.038	5.0	µg/L	1	4/19/2017 20:08
Fluorene	U		0.051	5.0	µg/L	1	4/19/2017 20:08
Hexachlorobenzene	U		0.44	5.0	µg/L	1	4/19/2017 20:08
Hexachlorobutadiene	U		0.28	5.0	µg/L	1	4/19/2017 20:08
Hexachlorocyclopentadiene	U		1.1	5.0	µg/L	1	4/19/2017 20:08
Hexachloroethane	U		0.21	5.0	µg/L	1	4/19/2017 20:08
Indeno(1,2,3-cd)pyrene	U		0.067	5.0	µg/L	1	4/19/2017 20:08
Isophorone	U		0.34	5.0	µg/L	1	4/19/2017 20:08
Naphthalene	U		0.067	5.0	µg/L	1	4/19/2017 20:08
Nitrobenzene	U		0.26	5.0	µg/L	1	4/19/2017 20:08
N-Nitrosodi-n-propylamine	U		0.35	5.0	µg/L	1	4/19/2017 20:08
N-Nitrosodiphenylamine	U		0.23	5.0	µg/L	1	4/19/2017 20:08
Pentachlorophenol	U		0.97	5.0	µg/L	1	4/19/2017 20:08
Phenanthrene	U		0.030	5.0	µg/L	1	4/19/2017 20:08
Phenol	U		0.21	5.0	µg/L	1	4/19/2017 20:08
Pyrene	U		0.036	5.0	µg/L	1	4/19/2017 20:08
Surr: 2,4,6-Tribromophenol	50.0			38-115	%REC	1	4/19/2017 20:08
Surr: 2-Fluorobiphenyl	44.0			32-100	%REC	1	4/19/2017 20:08
Surr: 2-Fluorophenol	34.4			22-59	%REC	1	4/19/2017 20:08
Surr: 4-Terphenyl-d14	56.5			23-112	%REC	1	4/19/2017 20:08
Surr: Nitrobenzene-d5	44.2			31-93	%REC	1	4/19/2017 20:08
Surr: Phenol-d6	18.1			13-36	%REC	1	4/19/2017 20:08
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 02:47
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 02:47
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 02:47
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 02:47
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 02:47

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-044
Collection Date: 4/13/2017 12:25 PM

Work Order: 1704842
Lab ID: 1704842-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 02:47
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 02:47
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 02:47
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 02:47
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 02:47
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 02:47
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 02:47
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 02:47
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 02:47
2-Butanone	U		0.58	25	µg/L	1	4/19/2017 02:47
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 02:47
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/19/2017 02:47
Acetone	3.1	J	0.92	50	µg/L	1	4/19/2017 02:47
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 02:47
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 02:47
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 02:47
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 02:47
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 02:47
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 02:47
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 02:47
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 02:47
Chloroform	0.52	J	0.26	1.0	µg/L	1	4/19/2017 02:47
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 02:47
cis-1,2-Dichloroethene	0.70	J	0.25	1.0	µg/L	1	4/19/2017 02:47
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 02:47
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 02:47
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 02:47
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 02:47
Ethylbenzene	U		0.40	1.0	µg/L	1	4/19/2017 02:47
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/19/2017 02:47
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 02:47
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 02:47
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 02:47
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 02:47
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 02:47
Tetrachloroethene	3.1		0.27	1.0	µg/L	1	4/19/2017 02:47
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 02:47
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 02:47
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 02:47
Trichloroethene	0.81	J	0.30	1.0	µg/L	1	4/19/2017 02:47

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-044
Collection Date: 4/13/2017 12:25 PM

Work Order: 1704842
Lab ID: 1704842-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 02:47
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 02:47
Xylenes, Total	U		1.3	3.0	µg/L	1	4/19/2017 02:47
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	1	4/19/2017 02:47
Surr: 4-Bromofluorobenzene	100			80-110	%REC	1	4/19/2017 02:47
Surr: Dibromofluoromethane	98.2			85-115	%REC	1	4/19/2017 02:47
Surr: Toluene-d8	97.2			85-110	%REC	1	4/19/2017 02:47

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-045
Collection Date: 4/13/2017 01:45 PM

Work Order: 1704842
Lab ID: 1704842-23
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D		Prep: SW3510 / 4/18/17		Analyst: RM
1,1'-Biphenyl	U		0.46	5.5	µg/L	1	4/19/2017 20:29
2,4,5-Trichlorophenol	U		0.19	5.5	µg/L	1	4/19/2017 20:29
2,4,6-Trichlorophenol	U		0.27	5.5	µg/L	1	4/19/2017 20:29
2,4-Dichlorophenol	U		0.38	5.5	µg/L	1	4/19/2017 20:29
2,4-Dimethylphenol	2.8	J	0.40	5.5	µg/L	1	4/19/2017 20:29
2,4-Dinitrophenol	U		0.44	5.5	µg/L	1	4/19/2017 20:29
2,4-Dinitrotoluene	U		0.46	5.5	µg/L	1	4/19/2017 20:29
2,6-Dinitrotoluene	U		0.12	5.5	µg/L	1	4/19/2017 20:29
2-Chloronaphthalene	U		0.082	5.5	µg/L	1	4/19/2017 20:29
2-Chlorophenol	U		0.25	5.5	µg/L	1	4/19/2017 20:29
2-Methylnaphthalene	U		0.071	5.5	µg/L	1	4/19/2017 20:29
2-Methylphenol	0.88	J	0.27	5.5	µg/L	1	4/19/2017 20:29
2-Nitroaniline	U		0.23	5.5	µg/L	1	4/19/2017 20:29
2-Nitrophenol	U		0.37	5.5	µg/L	1	4/19/2017 20:29
3&4-Methylphenol	0.97	J	0.23	5.5	µg/L	1	4/19/2017 20:29
3,3'-Dichlorobenzidine	U		1.7	5.5	µg/L	1	4/19/2017 20:29
3-Nitroaniline	U		0.70	5.5	µg/L	1	4/19/2017 20:29
4,6-Dinitro-2-methylphenol	U		0.30	5.5	µg/L	1	4/19/2017 20:29
4-Bromophenyl phenyl ether	U		0.36	5.5	µg/L	1	4/19/2017 20:29
4-Chloro-3-methylphenol	U		0.29	5.5	µg/L	1	4/19/2017 20:29
4-Chloroaniline	U		0.37	5.5	µg/L	1	4/19/2017 20:29
4-Chlorophenyl phenyl ether	U		0.34	5.5	µg/L	1	4/19/2017 20:29
4-Nitroaniline	U		0.63	5.5	µg/L	1	4/19/2017 20:29
4-Nitrophenol	U		0.26	5.5	µg/L	1	4/19/2017 20:29
Acenaphthene	U		0.089	5.5	µg/L	1	4/19/2017 20:29
Acenaphthylene	U		0.082	5.5	µg/L	1	4/19/2017 20:29
Acetophenone	U		0.41	1.1	µg/L	1	4/19/2017 20:29
Anthracene	U		0.031	5.5	µg/L	1	4/19/2017 20:29
Atrazine	U		0.38	1.1	µg/L	1	4/19/2017 20:29
Benzaldehyde	U		0.57	1.1	µg/L	1	4/19/2017 20:29
Benzo(a)anthracene	U		0.024	5.5	µg/L	1	4/19/2017 20:29
Benzo(a)pyrene	U		0.048	5.5	µg/L	1	4/19/2017 20:29
Benzo(b)fluoranthene	U		0.056	5.5	µg/L	1	4/19/2017 20:29
Benzo(g,h,i)perylene	U		0.033	5.5	µg/L	1	4/19/2017 20:29
Benzo(k)fluoranthene	U		0.053	5.5	µg/L	1	4/19/2017 20:29
Bis(2-chloroethoxy)methane	U		0.32	5.5	µg/L	1	4/19/2017 20:29
Bis(2-chloroethyl)ether	U		0.41	5.5	µg/L	1	4/19/2017 20:29
Bis(2-chloroisopropyl)ether	U		0.25	5.5	µg/L	1	4/19/2017 20:29

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-045
Collection Date: 4/13/2017 01:45 PM

Work Order: 1704842
Lab ID: 1704842-23
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.44	5.5	µg/L	1	4/19/2017 20:29
Butyl benzyl phthalate	U		0.33	5.5	µg/L	1	4/19/2017 20:29
Caprolactam	U		1.1	11	µg/L	1	4/19/2017 20:29
Carbazole	U		0.11	5.5	µg/L	1	4/19/2017 20:29
Chrysene	U		0.053	5.5	µg/L	1	4/19/2017 20:29
Dibenzo(a,h)anthracene	U		0.033	5.5	µg/L	1	4/19/2017 20:29
Dibenzofuran	U		0.25	5.5	µg/L	1	4/19/2017 20:29
Diethyl phthalate	U		0.19	5.5	µg/L	1	4/19/2017 20:29
Dimethyl phthalate	U		0.20	5.5	µg/L	1	4/19/2017 20:29
Di-n-butyl phthalate	U		0.23	5.5	µg/L	1	4/19/2017 20:29
Di-n-octyl phthalate	U		0.16	5.5	µg/L	1	4/19/2017 20:29
Fluoranthene	U		0.042	5.5	µg/L	1	4/19/2017 20:29
Fluorene	U		0.056	5.5	µg/L	1	4/19/2017 20:29
Hexachlorobenzene	U		0.48	5.5	µg/L	1	4/19/2017 20:29
Hexachlorobutadiene	U		0.31	5.5	µg/L	1	4/19/2017 20:29
Hexachlorocyclopentadiene	U		1.2	5.5	µg/L	1	4/19/2017 20:29
Hexachloroethane	U		0.23	5.5	µg/L	1	4/19/2017 20:29
Indeno(1,2,3-cd)pyrene	U		0.074	5.5	µg/L	1	4/19/2017 20:29
Isophorone	U		0.37	5.5	µg/L	1	4/19/2017 20:29
Naphthalene	0.65	J	0.074	5.5	µg/L	1	4/19/2017 20:29
Nitrobenzene	U		0.29	5.5	µg/L	1	4/19/2017 20:29
N-Nitrosodi-n-propylamine	U		0.38	5.5	µg/L	1	4/19/2017 20:29
N-Nitrosodiphenylamine	U		0.25	5.5	µg/L	1	4/19/2017 20:29
Pentachlorophenol	U		1.1	5.5	µg/L	1	4/19/2017 20:29
Phenanthrene	U		0.033	5.5	µg/L	1	4/19/2017 20:29
Phenol	U		0.23	5.5	µg/L	1	4/19/2017 20:29
Pyrene	U		0.040	5.5	µg/L	1	4/19/2017 20:29
Surr: 2,4,6-Tribromophenol	71.4			38-115	%REC	1	4/19/2017 20:29
Surr: 2-Fluorobiphenyl	75.3			32-100	%REC	1	4/19/2017 20:29
Surr: 2-Fluorophenol	48.5			22-59	%REC	1	4/19/2017 20:29
Surr: 4-Terphenyl-d14	59.0			23-112	%REC	1	4/19/2017 20:29
Surr: Nitrobenzene-d5	67.9			31-93	%REC	1	4/19/2017 20:29
Surr: Phenol-d6	27.2			13-36	%REC	1	4/19/2017 20:29
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 03:12
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 03:12
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 03:12
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 03:12
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 03:12

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-045
Collection Date: 4/13/2017 01:45 PM

Work Order: 1704842
Lab ID: 1704842-23
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 03:12
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 03:12
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 03:12
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 03:12
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 03:12
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 03:12
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 03:12
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 03:12
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 03:12
2-Butanone	2.8	J	0.58	25	µg/L	1	4/19/2017 03:12
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 03:12
4-Methyl-2-pentanone	0.69	J	0.11	50	µg/L	1	4/19/2017 03:12
Acetone	8.5	J	0.92	50	µg/L	1	4/19/2017 03:12
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 03:12
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 03:12
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 03:12
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 03:12
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 03:12
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 03:12
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 03:12
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 03:12
Chloroform	U		0.26	1.0	µg/L	1	4/19/2017 03:12
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 03:12
cis-1,2-Dichloroethene	0.86	J	0.25	1.0	µg/L	1	4/19/2017 03:12
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 03:12
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 03:12
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 03:12
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 03:12
Ethylbenzene	0.67	J	0.40	1.0	µg/L	1	4/19/2017 03:12
Isopropylbenzene	1.6	J	0.31	5.0	µg/L	1	4/19/2017 03:12
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 03:12
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 03:12
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 03:12
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 03:12
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 03:12
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/19/2017 03:12
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 03:12
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 03:12
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 03:12
Trichloroethene	U		0.30	1.0	µg/L	1	4/19/2017 03:12

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-045
Collection Date: 4/13/2017 01:45 PM

Work Order: 1704842
Lab ID: 1704842-23
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 03:12
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 03:12
Xylenes, Total	2.4	J	1.3	3.0	µg/L	1	4/19/2017 03:12
Surr: 1,2-Dichloroethane-d4	96.6			75-120	%REC	1	4/19/2017 03:12
Surr: 4-Bromofluorobenzene	101			80-110	%REC	1	4/19/2017 03:12
Surr: Dibromofluoromethane	96.6			85-115	%REC	1	4/19/2017 03:12
Surr: Toluene-d8	95.6			85-110	%REC	1	4/19/2017 03:12

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-046
Collection Date: 4/13/2017 02:26 PM

Work Order: 1704842
Lab ID: 1704842-24
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D	Prep: SW3510 / 4/18/17		Analyst: RS	
1,1'-Biphenyl	U		0.45	5.4	µg/L	1	4/18/2017 20:17
2,4,5-Trichlorophenol	U		0.18	5.4	µg/L	1	4/18/2017 20:17
2,4,6-Trichlorophenol	U		0.27	5.4	µg/L	1	4/18/2017 20:17
2,4-Dichlorophenol	U		0.38	5.4	µg/L	1	4/18/2017 20:17
2,4-Dimethylphenol	U		0.39	5.4	µg/L	1	4/18/2017 20:17
2,4-Dinitrophenol	U		0.43	5.4	µg/L	1	4/18/2017 20:17
2,4-Dinitrotoluene	U		0.45	5.4	µg/L	1	4/18/2017 20:17
2,6-Dinitrotoluene	U		0.12	5.4	µg/L	1	4/18/2017 20:17
2-Chloronaphthalene	U		0.081	5.4	µg/L	1	4/18/2017 20:17
2-Chlorophenol	U		0.25	5.4	µg/L	1	4/18/2017 20:17
2-Methylnaphthalene	U		0.070	5.4	µg/L	1	4/18/2017 20:17
2-Methylphenol	U		0.27	5.4	µg/L	1	4/18/2017 20:17
2-Nitroaniline	U		0.23	5.4	µg/L	1	4/18/2017 20:17
2-Nitrophenol	U		0.37	5.4	µg/L	1	4/18/2017 20:17
3&4-Methylphenol	U		0.23	5.4	µg/L	1	4/18/2017 20:17
3,3'-Dichlorobenzidine	U		1.7	5.4	µg/L	1	4/18/2017 20:17
3-Nitroaniline	U		0.69	5.4	µg/L	1	4/18/2017 20:17
4,6-Dinitro-2-methylphenol	U		0.29	5.4	µg/L	1	4/18/2017 20:17
4-Bromophenyl phenyl ether	U		0.35	5.4	µg/L	1	4/18/2017 20:17
4-Chloro-3-methylphenol	U		0.28	5.4	µg/L	1	4/18/2017 20:17
4-Chloroaniline	U		0.37	5.4	µg/L	1	4/18/2017 20:17
4-Chlorophenyl phenyl ether	U		0.33	5.4	µg/L	1	4/18/2017 20:17
4-Nitroaniline	U		0.61	5.4	µg/L	1	4/18/2017 20:17
4-Nitrophenol	U		0.26	5.4	µg/L	1	4/18/2017 20:17
Acenaphthene	U		0.087	5.4	µg/L	1	4/18/2017 20:17
Acenaphthylene	U		0.081	5.4	µg/L	1	4/18/2017 20:17
Acetophenone	U		0.40	1.1	µg/L	1	4/18/2017 20:17
Anthracene	U		0.030	5.4	µg/L	1	4/18/2017 20:17
Atrazine	U		0.38	1.1	µg/L	1	4/18/2017 20:17
Benzaldehyde	U		0.56	1.1	µg/L	1	4/18/2017 20:17
Benzo(a)anthracene	U		0.024	5.4	µg/L	1	4/18/2017 20:17
Benzo(a)pyrene	U		0.047	5.4	µg/L	1	4/18/2017 20:17
Benzo(b)fluoranthene	U		0.055	5.4	µg/L	1	4/18/2017 20:17
Benzo(g,h,i)perylene	U		0.032	5.4	µg/L	1	4/18/2017 20:17
Benzo(k)fluoranthene	U		0.052	5.4	µg/L	1	4/18/2017 20:17
Bis(2-chloroethoxy)methane	U		0.31	5.4	µg/L	1	4/18/2017 20:17
Bis(2-chloroethyl)ether	U		0.40	5.4	µg/L	1	4/18/2017 20:17
Bis(2-chloroisopropyl)ether	U		0.25	5.4	µg/L	1	4/18/2017 20:17

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-046
Collection Date: 4/13/2017 02:26 PM

Work Order: 1704842
Lab ID: 1704842-24
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.43	5.4	µg/L	1	4/18/2017 20:17
Butyl benzyl phthalate	U		0.32	5.4	µg/L	1	4/18/2017 20:17
Caprolactam	U		1.0	11	µg/L	1	4/18/2017 20:17
Carbazole	U		0.11	5.4	µg/L	1	4/18/2017 20:17
Chrysene	U		0.052	5.4	µg/L	1	4/18/2017 20:17
Dibenzo(a,h)anthracene	U		0.032	5.4	µg/L	1	4/18/2017 20:17
Dibenzofuran	U		0.25	5.4	µg/L	1	4/18/2017 20:17
Diethyl phthalate	U		0.18	5.4	µg/L	1	4/18/2017 20:17
Dimethyl phthalate	U		0.19	5.4	µg/L	1	4/18/2017 20:17
Di-n-butyl phthalate	U		0.23	5.4	µg/L	1	4/18/2017 20:17
Di-n-octyl phthalate	U		0.16	5.4	µg/L	1	4/18/2017 20:17
Fluoranthene	U		0.041	5.4	µg/L	1	4/18/2017 20:17
Fluorene	U		0.055	5.4	µg/L	1	4/18/2017 20:17
Hexachlorobenzene	U		0.47	5.4	µg/L	1	4/18/2017 20:17
Hexachlorobutadiene	U		0.30	5.4	µg/L	1	4/18/2017 20:17
Hexachlorocyclopentadiene	U		1.2	5.4	µg/L	1	4/18/2017 20:17
Hexachloroethane	U		0.23	5.4	µg/L	1	4/18/2017 20:17
Indeno(1,2,3-cd)pyrene	U		0.072	5.4	µg/L	1	4/18/2017 20:17
Isophorone	U		0.37	5.4	µg/L	1	4/18/2017 20:17
Naphthalene	U		0.072	5.4	µg/L	1	4/18/2017 20:17
Nitrobenzene	U		0.28	5.4	µg/L	1	4/18/2017 20:17
N-Nitrosodi-n-propylamine	U		0.38	5.4	µg/L	1	4/18/2017 20:17
N-Nitrosodiphenylamine	U		0.25	5.4	µg/L	1	4/18/2017 20:17
Pentachlorophenol	U		1.0	5.4	µg/L	1	4/18/2017 20:17
Phenanthrene	U		0.032	5.4	µg/L	1	4/18/2017 20:17
Phenol	U		0.23	5.4	µg/L	1	4/18/2017 20:17
Pyrene	U		0.039	5.4	µg/L	1	4/18/2017 20:17
Surr: 2,4,6-Tribromophenol	67.6			38-115	%REC	1	4/18/2017 20:17
Surr: 2-Fluorobiphenyl	69.7			32-100	%REC	1	4/18/2017 20:17
Surr: 2-Fluorophenol	44.3			22-59	%REC	1	4/18/2017 20:17
Surr: 4-Terphenyl-d14	89.6			23-112	%REC	1	4/18/2017 20:17
Surr: Nitrobenzene-d5	61.6			31-93	%REC	1	4/18/2017 20:17
Surr: Phenol-d6	34.0			13-36	%REC	1	4/18/2017 20:17
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 03:38
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 03:38
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 03:38
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 03:38
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 03:38

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-046
Collection Date: 4/13/2017 02:26 PM

Work Order: 1704842
Lab ID: 1704842-24
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 03:38
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 03:38
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 03:38
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 03:38
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 03:38
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 03:38
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 03:38
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 03:38
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 03:38
2-Butanone	U		0.58	25	µg/L	1	4/19/2017 03:38
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 03:38
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/19/2017 03:38
Acetone	4.1	J	0.92	50	µg/L	1	4/19/2017 03:38
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 03:38
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 03:38
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 03:38
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 03:38
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 03:38
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 03:38
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 03:38
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 03:38
Chloroform	U		0.26	1.0	µg/L	1	4/19/2017 03:38
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 03:38
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/19/2017 03:38
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 03:38
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 03:38
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 03:38
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 03:38
Ethylbenzene	U		0.40	1.0	µg/L	1	4/19/2017 03:38
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/19/2017 03:38
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 03:38
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 03:38
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 03:38
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 03:38
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 03:38
Tetrachloroethene	1.3		0.27	1.0	µg/L	1	4/19/2017 03:38
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 03:38
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 03:38
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 03:38
Trichloroethene	0.52	J	0.30	1.0	µg/L	1	4/19/2017 03:38

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

ALS Group, USA**Date:** 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-046
Collection Date: 4/13/2017 02:26 PM

Work Order: 1704842
Lab ID: 1704842-24
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 03:38
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 03:38
Xylenes, Total	U		1.3	3.0	µg/L	1	4/19/2017 03:38
Surr: 1,2-Dichloroethane-d4	100			75-120	%REC	1	4/19/2017 03:38
Surr: 4-Bromofluorobenzene	99.0			80-110	%REC	1	4/19/2017 03:38
Surr: Dibromofluoromethane	97.7			85-115	%REC	1	4/19/2017 03:38
Surr: Toluene-d8	96.2			85-110	%REC	1	4/19/2017 03:38

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-047
Collection Date: 4/13/2017 03:01 PM

Work Order: 1704842
Lab ID: 1704842-25
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: SW846 8270D	Prep: SW3510 / 4/18/17		Analyst: RM	
1,1'-Biphenyl	U		0.42	5.0	µg/L	1	4/19/2017 20:50
2,4,5-Trichlorophenol	U		0.17	5.0	µg/L	1	4/19/2017 20:50
2,4,6-Trichlorophenol	U		0.25	5.0	µg/L	1	4/19/2017 20:50
2,4-Dichlorophenol	U		0.35	5.0	µg/L	1	4/19/2017 20:50
2,4-Dimethylphenol	U		0.36	5.0	µg/L	1	4/19/2017 20:50
2,4-Dinitrophenol	U		0.40	5.0	µg/L	1	4/19/2017 20:50
2,4-Dinitrotoluene	U		0.42	5.0	µg/L	1	4/19/2017 20:50
2,6-Dinitrotoluene	U		0.11	5.0	µg/L	1	4/19/2017 20:50
2-Chloronaphthalene	U		0.075	5.0	µg/L	1	4/19/2017 20:50
2-Chlorophenol	U		0.23	5.0	µg/L	1	4/19/2017 20:50
2-Methylnaphthalene	U		0.065	5.0	µg/L	1	4/19/2017 20:50
2-Methylphenol	U		0.25	5.0	µg/L	1	4/19/2017 20:50
2-Nitroaniline	U		0.21	5.0	µg/L	1	4/19/2017 20:50
2-Nitrophenol	U		0.34	5.0	µg/L	1	4/19/2017 20:50
3&4-Methylphenol	U		0.21	5.0	µg/L	1	4/19/2017 20:50
3,3'-Dichlorobenzidine	U		1.6	5.0	µg/L	1	4/19/2017 20:50
3-Nitroaniline	U		0.64	5.0	µg/L	1	4/19/2017 20:50
4,6-Dinitro-2-methylphenol	U		0.27	5.0	µg/L	1	4/19/2017 20:50
4-Bromophenyl phenyl ether	U		0.33	5.0	µg/L	1	4/19/2017 20:50
4-Chloro-3-methylphenol	U		0.26	5.0	µg/L	1	4/19/2017 20:50
4-Chloroaniline	U		0.34	5.0	µg/L	1	4/19/2017 20:50
4-Chlorophenyl phenyl ether	U		0.31	5.0	µg/L	1	4/19/2017 20:50
4-Nitroaniline	U		0.57	5.0	µg/L	1	4/19/2017 20:50
4-Nitrophenol	U		0.24	5.0	µg/L	1	4/19/2017 20:50
Acenaphthene	U		0.081	5.0	µg/L	1	4/19/2017 20:50
Acenaphthylene	U		0.075	5.0	µg/L	1	4/19/2017 20:50
Acetophenone	U		0.37	1.0	µg/L	1	4/19/2017 20:50
Anthracene	U		0.028	5.0	µg/L	1	4/19/2017 20:50
Atrazine	U		0.35	1.0	µg/L	1	4/19/2017 20:50
Benzaldehyde	U		0.52	1.0	µg/L	1	4/19/2017 20:50
Benzo(a)anthracene	U		0.022	5.0	µg/L	1	4/19/2017 20:50
Benzo(a)pyrene	U		0.044	5.0	µg/L	1	4/19/2017 20:50
Benzo(b)fluoranthene	U		0.051	5.0	µg/L	1	4/19/2017 20:50
Benzo(g,h,i)perylene	U		0.030	5.0	µg/L	1	4/19/2017 20:50
Benzo(k)fluoranthene	U		0.048	5.0	µg/L	1	4/19/2017 20:50
Bis(2-chloroethoxy)methane	U		0.29	5.0	µg/L	1	4/19/2017 20:50
Bis(2-chloroethyl)ether	U		0.37	5.0	µg/L	1	4/19/2017 20:50
Bis(2-chloroisopropyl)ether	U		0.23	5.0	µg/L	1	4/19/2017 20:50

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-047
Collection Date: 4/13/2017 03:01 PM

Work Order: 1704842
Lab ID: 1704842-25
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	U		0.40	5.0	µg/L	1	4/19/2017 20:50
Butyl benzyl phthalate	U		0.30	5.0	µg/L	1	4/19/2017 20:50
Caprolactam	U		0.96	10	µg/L	1	4/19/2017 20:50
Carbazole	U		0.10	5.0	µg/L	1	4/19/2017 20:50
Chrysene	U		0.048	5.0	µg/L	1	4/19/2017 20:50
Dibenzo(a,h)anthracene	U		0.030	5.0	µg/L	1	4/19/2017 20:50
Dibenzofuran	U		0.23	5.0	µg/L	1	4/19/2017 20:50
Diethyl phthalate	U		0.17	5.0	µg/L	1	4/19/2017 20:50
Dimethyl phthalate	U		0.18	5.0	µg/L	1	4/19/2017 20:50
Di-n-butyl phthalate	U		0.21	5.0	µg/L	1	4/19/2017 20:50
Di-n-octyl phthalate	U		0.15	5.0	µg/L	1	4/19/2017 20:50
Fluoranthene	U		0.038	5.0	µg/L	1	4/19/2017 20:50
Fluorene	U		0.051	5.0	µg/L	1	4/19/2017 20:50
Hexachlorobenzene	U		0.44	5.0	µg/L	1	4/19/2017 20:50
Hexachlorobutadiene	U		0.28	5.0	µg/L	1	4/19/2017 20:50
Hexachlorocyclopentadiene	U		1.1	5.0	µg/L	1	4/19/2017 20:50
Hexachloroethane	U		0.21	5.0	µg/L	1	4/19/2017 20:50
Indeno(1,2,3-cd)pyrene	U		0.067	5.0	µg/L	1	4/19/2017 20:50
Isophorone	U		0.34	5.0	µg/L	1	4/19/2017 20:50
Naphthalene	U		0.067	5.0	µg/L	1	4/19/2017 20:50
Nitrobenzene	U		0.26	5.0	µg/L	1	4/19/2017 20:50
N-Nitrosodi-n-propylamine	U		0.35	5.0	µg/L	1	4/19/2017 20:50
N-Nitrosodiphenylamine	U		0.23	5.0	µg/L	1	4/19/2017 20:50
Pentachlorophenol	U		0.97	5.0	µg/L	1	4/19/2017 20:50
Phenanthrene	U		0.030	5.0	µg/L	1	4/19/2017 20:50
Phenol	U		0.21	5.0	µg/L	1	4/19/2017 20:50
Pyrene	U		0.036	5.0	µg/L	1	4/19/2017 20:50
Surr: 2,4,6-Tribromophenol	74.0			38-115	%REC	1	4/19/2017 20:50
Surr: 2-Fluorobiphenyl	69.5			32-100	%REC	1	4/19/2017 20:50
Surr: 2-Fluorophenol	39.2			22-59	%REC	1	4/19/2017 20:50
Surr: 4-Terphenyl-d14	74.8			23-112	%REC	1	4/19/2017 20:50
Surr: Nitrobenzene-d5	55.7			31-93	%REC	1	4/19/2017 20:50
Surr: Phenol-d6	21.4			13-36	%REC	1	4/19/2017 20:50
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: BG
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/19/2017 04:04
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/19/2017 04:04
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/19/2017 04:04
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/19/2017 04:04
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/19/2017 04:04

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-047
Collection Date: 4/13/2017 03:01 PM

Work Order: 1704842
Lab ID: 1704842-25
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 04:04
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/19/2017 04:04
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/19/2017 04:04
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/19/2017 04:04
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/19/2017 04:04
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/19/2017 04:04
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/19/2017 04:04
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/19/2017 04:04
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/19/2017 04:04
2-Butanone	U		0.58	25	µg/L	1	4/19/2017 04:04
2-Hexanone	U		0.13	50	µg/L	1	4/19/2017 04:04
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/19/2017 04:04
Acetone	5.6	J	0.92	50	µg/L	1	4/19/2017 04:04
Benzene	U		0.30	1.0	µg/L	1	4/19/2017 04:04
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/19/2017 04:04
Bromoform	U		0.77	1.0	µg/L	1	4/19/2017 04:04
Bromomethane	U		0.38	5.0	µg/L	1	4/19/2017 04:04
Carbon disulfide	U		0.23	5.0	µg/L	1	4/19/2017 04:04
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/19/2017 04:04
Chlorobenzene	U		0.27	1.0	µg/L	1	4/19/2017 04:04
Chloroethane	U		0.29	5.0	µg/L	1	4/19/2017 04:04
Chloroform	U		0.26	1.0	µg/L	1	4/19/2017 04:04
Chloromethane	U		0.17	5.0	µg/L	1	4/19/2017 04:04
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/19/2017 04:04
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/19/2017 04:04
Cyclohexane	U		0.22	1.0	µg/L	1	4/19/2017 04:04
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/19/2017 04:04
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/19/2017 04:04
Ethylbenzene	U		0.40	1.0	µg/L	1	4/19/2017 04:04
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/19/2017 04:04
Methyl acetate	U		0.23	10	µg/L	1	4/19/2017 04:04
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/19/2017 04:04
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/19/2017 04:04
Methylene chloride	U		0.56	5.0	µg/L	1	4/19/2017 04:04
Styrene	U		0.24	1.0	µg/L	1	4/19/2017 04:04
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/19/2017 04:04
Toluene	U		0.37	1.0	µg/L	1	4/19/2017 04:04
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/19/2017 04:04
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/19/2017 04:04
Trichloroethene	U		0.30	1.0	µg/L	1	4/19/2017 04:04

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: WG-017360-041317-MR-047
Collection Date: 4/13/2017 03:01 PM

Work Order: 1704842
Lab ID: 1704842-25
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/19/2017 04:04
Vinyl chloride	U		0.20	1.0	µg/L	1	4/19/2017 04:04
Xylenes, Total	U		1.3	3.0	µg/L	1	4/19/2017 04:04
Surr: 1,2-Dichloroethane-d4	101			75-120	%REC	1	4/19/2017 04:04
Surr: 4-Bromofluorobenzene	99.2			80-110	%REC	1	4/19/2017 04:04
Surr: Dibromofluoromethane	96.5			85-115	%REC	1	4/19/2017 04:04
Surr: Toluene-d8	96.0			85-110	%REC	1	4/19/2017 04:04

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: Trip Blank-2
Collection Date: 4/13/2017

Work Order: 1704842
Lab ID: 1704842-26
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: EMR	
1,1,1-Trichloroethane	U		0.36	1.0	µg/L	1	4/18/2017 12:26
1,1,2,2-Tetrachloroethane	U		0.19	1.0	µg/L	1	4/18/2017 12:26
1,1,2-Trichloroethane	U		0.40	1.0	µg/L	1	4/18/2017 12:26
1,1,2-Trichlorotrifluoroethane	U		0.42	1.0	µg/L	1	4/18/2017 12:26
1,1-Dichloroethane	U		0.31	1.0	µg/L	1	4/18/2017 12:26
1,1-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 12:26
1,2,4-Trichlorobenzene	U		0.21	5.0	µg/L	1	4/18/2017 12:26
1,2-Dibromo-3-chloropropane	U		0.97	1.0	µg/L	1	4/18/2017 12:26
1,2-Dibromoethane	U		0.98	1.0	µg/L	1	4/18/2017 12:26
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	4/18/2017 12:26
1,2-Dichloroethane	U		0.17	1.0	µg/L	1	4/18/2017 12:26
1,2-Dichloropropane	U		0.25	1.0	µg/L	1	4/18/2017 12:26
1,3-Dichlorobenzene	U		0.29	1.0	µg/L	1	4/18/2017 12:26
1,4-Dichlorobenzene	U		0.21	1.0	µg/L	1	4/18/2017 12:26
2-Butanone	U		0.58	25	µg/L	1	4/18/2017 12:26
2-Hexanone	U		0.13	50	µg/L	1	4/18/2017 12:26
4-Methyl-2-pentanone	U		0.11	50	µg/L	1	4/18/2017 12:26
Acetone	U		0.92	50	µg/L	1	4/18/2017 12:26
Benzene	U		0.30	1.0	µg/L	1	4/18/2017 12:26
Bromodichloromethane	U		0.23	1.0	µg/L	1	4/18/2017 12:26
Bromoform	U		0.77	1.0	µg/L	1	4/18/2017 12:26
Bromomethane	U		0.38	5.0	µg/L	1	4/18/2017 12:26
Carbon disulfide	U		0.23	5.0	µg/L	1	4/18/2017 12:26
Carbon tetrachloride	U		0.31	1.0	µg/L	1	4/18/2017 12:26
Chlorobenzene	U		0.27	1.0	µg/L	1	4/18/2017 12:26
Chloroethane	U		0.29	5.0	µg/L	1	4/18/2017 12:26
Chloroform	U		0.26	1.0	µg/L	1	4/18/2017 12:26
Chloromethane	U		0.17	5.0	µg/L	1	4/18/2017 12:26
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	4/18/2017 12:26
cis-1,3-Dichloropropene	U		0.39	1.0	µg/L	1	4/18/2017 12:26
Cyclohexane	U		0.22	1.0	µg/L	1	4/18/2017 12:26
Dibromochloromethane	U		0.38	5.0	µg/L	1	4/18/2017 12:26
Dichlorodifluoromethane	U		0.13	5.0	µg/L	1	4/18/2017 12:26
Ethylbenzene	U		0.40	1.0	µg/L	1	4/18/2017 12:26
Isopropylbenzene	U		0.31	5.0	µg/L	1	4/18/2017 12:26
Methyl acetate	U		0.23	10	µg/L	1	4/18/2017 12:26
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	4/18/2017 12:26
Methylcyclohexane	U		0.27	1.0	µg/L	1	4/18/2017 12:26

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

ALS Group, USA

Date: 21-Apr-17

Client: GHD Services Inc.
Project: Former GRMP (17360)
Sample ID: Trip Blank-2
Collection Date: 4/13/2017

Work Order: 1704842
Lab ID: 1704842-26
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.56	5.0	µg/L	1	4/18/2017 12:26
Styrene	U		0.24	1.0	µg/L	1	4/18/2017 12:26
Tetrachloroethene	U		0.27	1.0	µg/L	1	4/18/2017 12:26
Toluene	U		0.37	1.0	µg/L	1	4/18/2017 12:26
trans-1,2-Dichloroethene	U		0.28	1.0	µg/L	1	4/18/2017 12:26
trans-1,3-Dichloropropene	U		0.82	1.0	µg/L	1	4/18/2017 12:26
Trichloroethene	U		0.30	1.0	µg/L	1	4/18/2017 12:26
Trichlorofluoromethane	U		0.20	1.0	µg/L	1	4/18/2017 12:26
Vinyl chloride	U		0.20	1.0	µg/L	1	4/18/2017 12:26
Xylenes, Total	U		1.3	3.0	µg/L	1	4/18/2017 12:26
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	1	4/18/2017 12:26
Surr: 4-Bromofluorobenzene	98.0			80-110	%REC	1	4/18/2017 12:26
Surr: Dibromofluoromethane	101			85-115	%REC	1	4/18/2017 12:26
Surr: Toluene-d8	95.4			85-110	%REC	1	4/18/2017 12:26

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

Client: GHD Services Inc.

Work Order: 1704842

Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: 100806

Instrument ID HG1

Method: SW7470A

(Dissolve)

MBLK		Sample ID: MBLK-100732-100806				Units: mg/L		Analysis Date: 4/19/2017 05:06 PM			
Client ID:		Run ID: HG1_170419A				SeqNo: 4386107		Prep Date: 4/19/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.000019	0.00020								

MBLK		Sample ID: MBLK-100806-100806				Units: mg/L		Analysis Date: 4/19/2017 05:12 PM			
Client ID:		Run ID: HG1_170419A				SeqNo: 4386109		Prep Date: 4/19/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.000019	0.00020								

LCS		Sample ID: LCS-100732-100806				Units: mg/L		Analysis Date: 4/19/2017 05:09 PM			
Client ID:		Run ID: HG1_170419A				SeqNo: 4386108		Prep Date: 4/19/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00201	0.000019	0.00020	0.002	0	100	80-120	0			

LCS		Sample ID: LCS-100806-100806				Units: mg/L		Analysis Date: 4/19/2017 05:14 PM			
Client ID:		Run ID: HG1_170419A				SeqNo: 4386110		Prep Date: 4/19/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00203	0.000019	0.00020	0.002	0	102	80-120	0			

MS		Sample ID: 1704959-07AMS				Units: mg/L		Analysis Date: 4/19/2017 06:25 PM			
Client ID:		Run ID: HG1_170419A				SeqNo: 4386134		Prep Date: 4/19/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0202	0.00019	0.0020	0.02	0	101	75-125	0			

MSD		Sample ID: 1704959-07AMSD				Units: mg/L		Analysis Date: 4/19/2017 06:27 PM			
Client ID:		Run ID: HG1_170419A				SeqNo: 4386135		Prep Date: 4/19/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0204	0.00019	0.0020	0.02	0	102	75-125	0.0202	0.985	20	

The following samples were analyzed in this batch:

1704842-10B 1704842-11B

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100743** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-100743-100743				Units: mg/L		Analysis Date: 4/18/2017 06:09 PM			
Client ID:		Run ID: ICPMS1_170418A				SeqNo: 4383357		Prep Date: 4/18/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00017	0.0050								
Arsenic	U	0.00087	0.0050								
Barium	U	0.0022	0.0050								
Cadmium	U	0.00005	0.0020								
Chromium	U	0.00065	0.0050								
Cobalt	U	0.00014	0.0050								
Copper	U	0.00028	0.0050								
Iron	0.01105	0.0046	0.080								J
Lead	U	0.00033	0.0050								
Manganese	U	0.00051	0.0050								
Molybdenum	0.0003612	0.00031	0.0050								J
Nickel	U	0.00041	0.0050								
Selenium	U	0.0009	0.0050								
Silver	U	0.00005	0.0050								
Thallium	U	0.00016	0.0050								
Vanadium	U	0.00098	0.0050								
Zinc	U	0.0014	0.010								

MBLK		Sample ID: MBLK-100732-100743				Units: mg/L		Analysis Date: 4/19/2017 05:44 PM			
Client ID:		Run ID: ICPMS2_170419A				SeqNo: 4387000		Prep Date: 4/18/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.001458	0.00017	0.0050	0	0	0	0-0	0			J
Arsenic	U	0.00087	0.0050	0	0	0	0-0	0			
Barium	U	0.0022	0.0050	0	0	0	0-0	0			
Beryllium	U	0.00012	0.0020	0	0	0	0-0	0			
Cadmium	U	0.00005	0.0020	0	0	0	0-0	0			
Chromium	U	0.00065	0.0050	0	0	0	0-0	0			
Cobalt	U	0.00014	0.0050	0	0	0	0-0	0			
Copper	U	0.00028	0.0050	0	0	0	0-0	0			
Lead	U	0.00033	0.0050	0	0	0	0-0	0			
Manganese	U	0.00051	0.0050	0	0	0	0-0	0			
Molybdenum	U	0.00031	0.0050	0	0	0	0-0	0			
Nickel	U	0.00041	0.0050	0	0	0	0-0	0			
Selenium	U	0.0009	0.0050	0	0	0	0-0	0			
Silver	U	0.00005	0.0050	0	0	0	0-0	0			
Thallium	U	0.00016	0.0050	0	0	0	0-0	0			
Vanadium	U	0.00098	0.0050	0	0	0	0-0	0			
Zinc	U	0.0014	0.010	0	0	0	0-0	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100743** Instrument ID **ICPMS1** Method: **SW6020A**

LCS		Sample ID: LCS-100743-100743				Units: mg/L		Analysis Date: 4/18/2017 06:15 PM			
Client ID:		Run ID: ICPMS1_170418A				SeqNo: 4383358		Prep Date: 4/18/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1096	0.00017	0.0050	0.1	0	110	80-120	0			
Arsenic	0.1063	0.00087	0.0050	0.1	0	106	80-120	0			
Barium	0.1057	0.0022	0.0050	0.1	0	106	80-120	0			
Cadmium	0.1101	0.00005	0.0020	0.1	0	110	80-120	0			
Chromium	0.1038	0.00065	0.0050	0.1	0	104	80-120	0			
Cobalt	0.1043	0.00014	0.0050	0.1	0	104	80-120	0			
Copper	0.1058	0.00028	0.0050	0.1	0	106	80-120	0			
Iron	10.59	0.0046	0.080	10	0	106	80-120	0			
Lead	0.1064	0.00033	0.0050	0.1	0	106	80-120	0			
Manganese	0.106	0.00051	0.0050	0.1	0	106	80-120	0			
Molybdenum	0.1065	0.00031	0.0050	0.1	0	106	80-120	0			
Nickel	0.106	0.00041	0.0050	0.1	0	106	80-120	0			
Selenium	0.1057	0.0009	0.0050	0.1	0	106	80-120	0			
Silver	0.1097	0.00005	0.0050	0.1	0	110	80-120	0			
Thallium	0.1022	0.00016	0.0050	0.1	0	102	80-120	0			
Vanadium	0.1041	0.00098	0.0050	0.1	0	104	80-120	0			
Zinc	0.1083	0.0014	0.010	0.1	0	108	80-120	0			

LCS		Sample ID: LCS-100732-100743				Units: mg/L		Analysis Date: 4/19/2017 05:49 PM			
Client ID:		Run ID: ICPMS2_170419A				SeqNo: 4387001		Prep Date: 4/18/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09739	0.00017	0.0050	0.1	0	97.4	80-120	0			
Arsenic	0.09848	0.00087	0.0050	0.1	0	98.5	80-120	0			
Barium	0.1028	0.0022	0.0050	0.1	0	103	80-120	0			
Beryllium	0.1034	0.00012	0.0020	0.1	0	103	80-120	0			
Cadmium	0.1011	0.00005	0.0020	0.1	0	101	80-120	0			
Chromium	0.09379	0.00065	0.0050	0.1	0	93.8	80-120	0			
Cobalt	0.09453	0.00014	0.0050	0.1	0	94.5	80-120	0			
Copper	0.1017	0.00028	0.0050	0.1	0	102	80-120	0			
Iron	10.08	0.0046	0.080	10	0	101	80-120	0			B
Lead	0.09836	0.00033	0.0050	0.1	0	98.4	80-120	0			
Manganese	0.1023	0.00051	0.0050	0.1	0	102	80-120	0			
Molybdenum	0.09864	0.00031	0.0050	0.1	0	98.6	80-120	0			
Nickel	0.1003	0.00041	0.0050	0.1	0	100	80-120	0			
Selenium	0.098	0.0009	0.0050	0.1	0	98	80-120	0			
Silver	0.09345	0.00005	0.0050	0.1	0	93.4	80-120	0			
Thallium	0.09754	0.00016	0.0050	0.1	0	97.5	80-120	0			
Vanadium	0.09578	0.00098	0.0050	0.1	0	95.8	80-120	0			
Zinc	0.09964	0.0014	0.010	0.1	0	99.6	80-120	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100743** Instrument ID **ICPMS1** Method: **SW6020A**

MS					Units: mg/L			Analysis Date: 4/18/2017 09:43 PM			
Client ID:		Run ID: ICPMS1_170418A			SeqNo: 4383390		Prep Date: 4/18/2017		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	1.007	0.0017	0.050	1	0.000736	101	80-120	0			
Arsenic	1.021	0.0087	0.050	1	0.0003263	102	80-120	0			
Barium	1.158	0.022	0.050	1	0.09796	106	80-120	0			
Beryllium	1.015	0.0012	0.020	1	0.0002056	101	80-120	0			
Cadmium	0.9788	0.0005	0.0020	1	0.00008252	97.9	80-120	0			
Chromium	1.06	0.0065	0.050	1	0.004529	106	80-120	0			
Cobalt	1.075	0.0014	0.050	1	0.05513	102	80-120	0			
Copper	1.01	0.0028	0.050	1	0.01118	99.9	80-120	0			
Iron	164.9	0.046	0.80	100	61.44	103	80-120	0			
Lead	1.099	0.0033	0.050	1	0.009841	109	80-120	0			
Manganese	2.107	0.0051	0.050	1	1.076	103	80-120	0			
Molybdenum	1.148	0.0031	0.050	1	0.1108	104	80-120	0			
Nickel	1.17	0.0041	0.050	1	0.1561	101	80-120	0			
Selenium	1.026	0.009	0.050	1	-0.0006728	103	80-120	0			
Silver	0.9555	0.0005	0.050	1	-0.0001554	95.6	80-120	0			
Thallium	1.089	0.0016	0.050	1	-0.000118	109	80-120	0			
Vanadium	1.231	0.0098	0.050	1	0.132	110	80-120	0			
Zinc	3.805	0.014	0.10	1	2.851	95.4	80-120	0			

MSD					Units: mg/L			Analysis Date: 4/18/2017 09:49 PM			
Client ID:		Run ID: ICPMS1_170418A			SeqNo: 4383391		Prep Date: 4/18/2017		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.9996	0.0017	0.050	1	0.000736	99.9	80-120	1.007	0.738	20	
Arsenic	1.027	0.0087	0.050	1	0.0003263	103	80-120	1.021	0.586	20	
Barium	1.149	0.022	0.050	1	0.09796	105	80-120	1.158	0.78	20	
Beryllium	0.9954	0.0012	0.020	1	0.0002056	99.5	80-120	1.015	1.95	20	
Cadmium	0.9675	0.0005	0.0020	1	0.00008252	96.7	80-120	0.9788	1.16	20	
Chromium	1.056	0.0065	0.050	1	0.004529	105	80-120	1.06	0.378	20	
Cobalt	1.079	0.0014	0.050	1	0.05513	102	80-120	1.075	0.371	20	
Copper	1.01	0.0028	0.050	1	0.01118	99.9	80-120	1.01	0	20	
Iron	164.6	0.046	0.80	100	61.44	103	80-120	164.9	0.182	20	
Lead	1.094	0.0033	0.050	1	0.009841	108	80-120	1.099	0.456	20	
Manganese	2.08	0.0051	0.050	1	1.076	100	80-120	2.107	1.29	20	
Molybdenum	1.156	0.0031	0.050	1	0.1108	105	80-120	1.148	0.694	20	
Nickel	1.172	0.0041	0.050	1	0.1561	102	80-120	1.17	0.171	20	
Selenium	0.9988	0.009	0.050	1	-0.0006728	99.9	80-120	1.026	2.69	20	
Silver	0.9541	0.0005	0.050	1	-0.0001554	95.4	80-120	0.9555	0.147	20	
Thallium	1.085	0.0016	0.050	1	-0.000118	109	80-120	1.089	0.368	20	
Vanadium	1.238	0.0098	0.050	1	0.132	111	80-120	1.231	0.567	20	
Zinc	3.734	0.014	0.10	1	2.851	88.3	80-120	3.805	1.88	20	

The following samples were analyzed in this batch:

1704842-10B 1704842-11B

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100726** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKW1-100726-100726				Units: µg/L		Analysis Date: 4/18/2017 04:56 PM			
Client ID:		Run ID: SVMS5_170418A				SeqNo: 4384411		Prep Date: 4/18/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	0.42	5.0								
2,4,5-Trichlorophenol	U	0.17	5.0								
2,4,6-Trichlorophenol	U	0.25	5.0								
2,4-Dichlorophenol	U	0.35	5.0								
2,4-Dimethylphenol	U	0.36	5.0								
2,4-Dinitrophenol	U	0.4	5.0								
2,4-Dinitrotoluene	U	0.42	5.0								
2,6-Dinitrotoluene	U	0.11	5.0								
2-Chloronaphthalene	U	0.075	5.0								
2-Chlorophenol	U	0.23	5.0								
2-Methylnaphthalene	U	0.065	5.0								
2-Methylphenol	U	0.25	5.0								
2-Nitroaniline	U	0.21	5.0								
2-Nitrophenol	U	0.34	5.0								
3&4-Methylphenol	U	0.21	5.0								
3,3'-Dichlorobenzidine	U	1.6	5.0								
3-Nitroaniline	U	0.64	5.0								
4,6-Dinitro-2-methylphenol	U	0.27	5.0								
4-Bromophenyl phenyl ether	U	0.33	5.0								
4-Chloro-3-methylphenol	U	0.26	5.0								
4-Chloroaniline	U	0.34	5.0								
4-Chlorophenyl phenyl ether	U	0.31	5.0								
4-Nitroaniline	U	0.57	5.0								
4-Nitrophenol	U	0.24	5.0								
Acenaphthene	U	0.081	5.0								
Acenaphthylene	U	0.075	5.0								
Acetophenone	U	0.37	1.0								
Anthracene	U	0.028	5.0								
Atrazine	U	0.35	1.0								
Benzaldehyde	U	0.52	1.0								
Benzo(a)anthracene	U	0.022	5.0								
Benzo(a)pyrene	U	0.044	5.0								
Benzo(b)fluoranthene	U	0.051	5.0								
Benzo(g,h,i)perylene	U	0.03	5.0								
Benzo(k)fluoranthene	U	0.048	5.0								
Bis(2-chloroethoxy)methane	U	0.29	5.0								
Bis(2-chloroethyl)ether	U	0.37	5.0								
Bis(2-chloroisopropyl)ether	U	0.23	5.0								
Bis(2-ethylhexyl)phthalate	U	0.4	5.0								
Butyl benzyl phthalate	U	0.3	5.0								
Caprolactam	U	0.96	10								
Carbazole	U	0.1	5.0								
Chrysene	U	0.048	5.0								

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: 100726		Instrument ID SVMS5		Method: SW846 8270D	
Dibenzo(a,h)anthracene	U	0.03	5.0		
Dibenzofuran	U	0.23	5.0		
Diethyl phthalate	U	0.17	5.0		
Dimethyl phthalate	U	0.18	5.0		
Di-n-butyl phthalate	U	0.21	5.0		
Di-n-octyl phthalate	U	0.15	5.0		
Fluoranthene	U	0.038	5.0		
Fluorene	U	0.051	5.0		
Hexachlorobenzene	U	0.44	5.0		
Hexachlorobutadiene	U	0.28	5.0		
Hexachlorocyclopentadiene	U	1.1	5.0		
Hexachloroethane	U	0.21	5.0		
Indeno(1,2,3-cd)pyrene	U	0.067	5.0		
Isophorone	U	0.34	5.0		
Naphthalene	U	0.067	5.0		
Nitrobenzene	U	0.26	5.0		
N-Nitrosodi-n-propylamine	U	0.35	5.0		
N-Nitrosodiphenylamine	U	0.23	5.0		
Pentachlorophenol	U	0.97	5.0		
Phenanthrene	U	0.03	5.0		
Phenol	U	0.21	5.0		
Pyrene	U	0.036	5.0		
<i>Surr: 2,4,6-Tribromophenol</i>	<i>32.09</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0 64.2 38-115 0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>32.72</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0 65.4 32-100 0</i>
<i>Surr: 2-Fluorophenol</i>	<i>23.92</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0 47.8 22-59 0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>37.93</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0 75.9 23-112 0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>33.18</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0 66.4 31-93 0</i>
<i>Surr: Phenol-d6</i>	<i>16.25</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0 32.5 13-36 0</i>

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100726** Instrument ID **SVMS5** Method: **SW846 8270D**

LCS		Sample ID: SLCSW1-100726-100726				Units: µg/L		Analysis Date: 4/18/2017 05:20 PM			
Client ID:		Run ID: SVMS5_170418A				SeqNo: 4384412		Prep Date: 4/18/2017		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	13.53	0.42	5.0	20	0	67.6	30-120	0			
2,4,5-Trichlorophenol	13.55	0.17	5.0	20	0	67.8	50-110	0			
2,4,6-Trichlorophenol	14.01	0.25	5.0	20	0	70	50-115	0			
2,4-Dichlorophenol	12.61	0.35	5.0	20	0	63	50-105	0			
2,4-Dimethylphenol	14.49	0.36	5.0	20	0	72.4	30-110	0			
2,4-Dinitrophenol	13.28	0.4	5.0	20	0	66.4	15-140	0			
2,4-Dinitrotoluene	13.74	0.42	5.0	20	0	68.7	50-120	0			
2,6-Dinitrotoluene	13.74	0.11	5.0	20	0	68.7	50-115	0			
2-Chloronaphthalene	13.16	0.075	5.0	20	0	65.8	50-105	0			
2-Chlorophenol	14.44	0.23	5.0	20	0	72.2	35-105	0			
2-Methylnaphthalene	13.45	0.065	5.0	20	0	67.2	45-105	0			
2-Methylphenol	14.34	0.25	5.0	20	0	71.7	40-110	0			
2-Nitroaniline	13.93	0.21	5.0	20	0	69.6	50-115	0			
2-Nitrophenol	12.45	0.34	5.0	20	0	62.2	40-115	0			
3&4-Methylphenol	13.59	0.21	5.0	20	0	68	30-110	0			
3,3'-Dichlorobenzidine	12.68	1.6	5.0	20	0	63.4	30-120	0			
3-Nitroaniline	14.59	0.64	5.0	20	0	73	20-125	0			
4,6-Dinitro-2-methylphenol	13.66	0.27	5.0	20	0	68.3	40-130	0			
4-Bromophenyl phenyl ether	14.56	0.33	5.0	20	0	72.8	50-115	0			
4-Chloro-3-methylphenol	14.44	0.26	5.0	20	0	72.2	45-110	0			
4-Chloroaniline	15.48	0.34	5.0	20	0	77.4	15-110	0			
4-Chlorophenyl phenyl ether	14.15	0.31	5.0	20	0	70.8	50-110	0			
4-Nitroaniline	13.09	0.57	5.0	20	0	65.4	35-150	0			
4-Nitrophenol	6.94	0.24	5.0	20	0	34.7	10-58	0			
Acenaphthene	13.17	0.081	5.0	20	0	65.8	45-110	0			
Acenaphthylene	13.68	0.075	5.0	20	0	68.4	50-105	0			
Acetophenone	15.57	0.37	1.0	20	0	77.8	30-120	0			
Anthracene	15.55	0.028	5.0	20	0	77.8	55-110	0			
Atrazine	14.44	0.35	1.0	20	0	72.2	30-120	0			
Benzaldehyde	16.29	0.52	1.0	20	0	81.4	30-120	0			
Benzo(a)anthracene	14.14	0.022	5.0	20	0	70.7	55-110	0			
Benzo(a)pyrene	14.95	0.044	5.0	20	0	74.8	55-110	0			
Benzo(b)fluoranthene	14.99	0.051	5.0	20	0	75	45-120	0			
Benzo(g,h,i)perylene	14.47	0.03	5.0	20	0	72.4	40-125	0			
Benzo(k)fluoranthene	15.23	0.048	5.0	20	0	76.2	45-125	0			
Bis(2-chloroethoxy)methane	14.27	0.29	5.0	20	0	71.4	45-105	0			
Bis(2-chloroethyl)ether	13.52	0.37	5.0	20	0	67.6	35-110	0			
Bis(2-ethylhexyl)phthalate	13.85	0.4	5.0	20	0	69.2	40-125	0			
Butyl benzyl phthalate	13.75	0.3	5.0	20	0	68.8	45-115	0			
Carbazole	15.29	0.1	5.0	20	0	76.4	50-150	0			
Chrysene	13.75	0.048	5.0	20	0	68.8	55-110	0			
Dibenzo(a,h)anthracene	14.17	0.03	5.0	20	0	70.8	40-125	0			
Dibenzofuran	13.77	0.23	5.0	20	0	68.8	55-105	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: 100726		Instrument ID SVMS5		Method: SW846 8270D				
Diethyl phthalate	14.76	0.17	5.0	20	0	73.8	40-120	0
Dimethyl phthalate	14.21	0.18	5.0	20	0	71	25-125	0
Di-n-butyl phthalate	15.14	0.21	5.0	20	0	75.7	55-115	0
Di-n-octyl phthalate	15.53	0.15	5.0	20	0	77.6	35-135	0
Fluoranthene	15.12	0.038	5.0	20	0	75.6	55-115	0
Fluorene	14.25	0.051	5.0	20	0	71.2	50-110	0
Hexachlorobenzene	14.22	0.44	5.0	20	0	71.1	50-110	0
Hexachlorobutadiene	11.36	0.28	5.0	20	0	56.8	25-105	0
Hexachlorocyclopentadiene	9.07	1.1	5.0	20	0	45.4	25-105	0
Hexachloroethane	11.55	0.21	5.0	20	0	57.8	30-95	0
Indeno(1,2,3-cd)pyrene	14.72	0.067	5.0	20	0	73.6	45-125	0
Isophorone	14.41	0.34	5.0	20	0	72	50-110	0
Naphthalene	12.3	0.067	5.0	20	0	61.5	40-100	0
Nitrobenzene	12.64	0.26	5.0	20	0	63.2	45-110	0
N-Nitrosodi-n-propylamine	16.1	0.35	5.0	20	0	80.5	35-130	0
N-Nitrosodiphenylamine	15.05	0.23	5.0	20	0	75.2	50-110	0
Pentachlorophenol	12.76	0.97	5.0	20	0	63.8	40-115	0
Phenanthrene	14.2	0.03	5.0	20	0	71	50-115	0
Phenol	7.11	0.21	5.0	20	0	35.6	12-43	0
Pyrene	15.57	0.036	5.0	20	0	77.8	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>34.06</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>68.1</i>	<i>38-115</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>33.63</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>67.3</i>	<i>32-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>22.82</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>45.6</i>	<i>22-59</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>38.08</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>76.2</i>	<i>23-112</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>33.31</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>66.6</i>	<i>31-93</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>15.94</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>31.9</i>	<i>13-36</i>	<i>0</i>

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100726** Instrument ID **SVMS5** Method: **SW846 8270D**

MS					Units: µg/L			Analysis Date: 4/18/2017 07:30 PM			
Sample ID: 1704842-24B MS					SeqNo: 4384413			Prep Date: 4/18/2017		DF: 1	
Client ID: WG-017360-041317-MR-046					Run ID: SVMS5_170418A						
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	13.68	0.42	5.0	20	0	68.4	30-120	0			
2,4,5-Trichlorophenol	14.61	0.17	5.0	20	0	73	50-110	0			
2,4,6-Trichlorophenol	14.81	0.25	5.0	20	0	74	50-115	0			
2,4-Dichlorophenol	13.86	0.35	5.0	20	0	69.3	50-105	0			
2,4-Dimethylphenol	17.17	0.36	5.0	20	0	85.8	30-110	0			
2,4-Dinitrophenol	16.2	0.4	5.0	20	0	81	15-140	0			
2,4-Dinitrotoluene	13.39	0.42	5.0	20	0	67	50-120	0			
2,6-Dinitrotoluene	13.39	0.11	5.0	20	0	67	50-115	0			
2-Chloronaphthalene	12.55	0.075	5.0	20	0	62.8	50-105	0			
2-Chlorophenol	14.35	0.23	5.0	20	0	71.8	35-105	0			
2-Methylnaphthalene	13.49	0.065	5.0	20	0	67.4	45-105	0			
2-Methylphenol	15.02	0.25	5.0	20	0	75.1	40-110	0			
2-Nitroaniline	14.31	0.21	5.0	20	0	71.6	50-115	0			
2-Nitrophenol	12.07	0.34	5.0	20	0	60.4	40-115	0			
3&4-Methylphenol	14.38	0.21	5.0	20	0	71.9	30-110	0			
3,3'-Dichlorobenzidine	U	1.6	5.0	20	0	0	30-120	0			S
3-Nitroaniline	7.55	0.64	5.0	20	0	37.8	20-125	0			
4,6-Dinitro-2-methylphenol	10.83	0.27	5.0	20	0	54.2	40-130	0			
4-Bromophenyl phenyl ether	13.88	0.33	5.0	20	0	69.4	50-115	0			
4-Chloro-3-methylphenol	15.84	0.26	5.0	20	0	79.2	45-110	0			
4-Chloroaniline	9.28	0.34	5.0	20	0	46.4	15-110	0			
4-Chlorophenyl phenyl ether	14	0.31	5.0	20	0	70	50-110	0			
4-Nitroaniline	8.91	0.57	5.0	20	0	44.6	35-150	0			
4-Nitrophenol	7.87	0.24	5.0	20	0	39.4	1-58	0			
Acenaphthene	12.66	0.081	5.0	20	0	63.3	45-110	0			
Acenaphthylene	13	0.075	5.0	20	0	65	50-105	0			
Acetophenone	14.49	0.37	1.0	20	0	72.4	30-120	0			
Anthracene	14.41	0.028	5.0	20	0	72	55-110	0			
Atrazine	7.72	0.35	1.0	20	0	38.6	30-120	0			
Benzaldehyde	16.19	0.52	1.0	20	0	81	30-120	0			
Benzo(a)anthracene	14.41	0.022	5.0	20	0	72	55-110	0			
Benzo(a)pyrene	14.24	0.044	5.0	20	0	71.2	55-110	0			
Benzo(b)fluoranthene	14.54	0.051	5.0	20	0	72.7	45-120	0			
Benzo(g,h,i)perylene	12.78	0.03	5.0	20	0	63.9	40-125	0			
Benzo(k)fluoranthene	13.79	0.048	5.0	20	0	69	45-125	0			
Bis(2-chloroethoxy)methane	13.55	0.29	5.0	20	0	67.8	45-105	0			
Bis(2-chloroethyl)ether	15.97	0.37	5.0	20	0	79.8	35-110	0			
Bis(2-ethylhexyl)phthalate	13.77	0.4	5.0	20	0	68.8	40-125	0			
Butyl benzyl phthalate	15.8	0.3	5.0	20	0	79	45-115	0			
Carbazole	16.6	0.1	5.0	20	0	83	50-150	0			
Chrysene	13.14	0.048	5.0	20	0	65.7	55-110	0			
Dibenzo(a,h)anthracene	12.8	0.03	5.0	20	0	64	40-125	0			
Dibenzofuran	13.34	0.23	5.0	20	0	66.7	55-105	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: 100726		Instrument ID SVMS5		Method: SW846 8270D				
Diethyl phthalate	13.8	0.17	5.0	20	0	69	40-120	0
Dimethyl phthalate	13.25	0.18	5.0	20	0	66.2	25-125	0
Di-n-butyl phthalate	16.91	0.21	5.0	20	0	84.6	55-115	0
Di-n-octyl phthalate	16.32	0.15	5.0	20	0	81.6	35-135	0
Fluoranthene	13.54	0.038	5.0	20	0	67.7	55-115	0
Fluorene	13.83	0.051	5.0	20	0	69.2	50-110	0
Hexachlorobenzene	12.93	0.44	5.0	20	0	64.6	50-110	0
Hexachlorobutadiene	11.39	0.28	5.0	20	0	57	25-105	0
Hexachlorocyclopentadiene	9.84	1.1	5.0	20	0	49.2	25-105	0
Hexachloroethane	11.39	0.21	5.0	20	0	57	30-95	0
Indeno(1,2,3-cd)pyrene	14.21	0.067	5.0	20	0	71	45-125	0
Isophorone	14.24	0.34	5.0	20	0	71.2	50-110	0
Naphthalene	11.35	0.067	5.0	20	0	56.8	40-100	0
Nitrobenzene	12.01	0.26	5.0	20	0	60	45-110	0
N-Nitrosodi-n-propylamine	15.75	0.35	5.0	20	0	78.8	35-130	0
N-Nitrosodiphenylamine	13.43	0.23	5.0	20	0	67.2	50-110	0
Pentachlorophenol	16.91	0.97	5.0	20	0	84.6	40-115	0
Phenanthrene	12.64	0.03	5.0	20	0	63.2	50-115	0
Phenol	6.45	0.21	5.0	20	0	32.2	12-43	0
Pyrene	17.21	0.036	5.0	20	0	86	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>32.28</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>64.6</i>	<i>38-115</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>31.61</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.2</i>	<i>32-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>20.77</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>41.5</i>	<i>22-59</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>42.63</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>85.3</i>	<i>23-112</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>31.62</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.2</i>	<i>31-93</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>16.27</i>	<i>0</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>32.5</i>	<i>13-36</i>	<i>0</i>

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **100726** Instrument ID **SVMS5** Method: **SW846 8270D**

MSD					Units: µg/L			Analysis Date: 4/18/2017 07:53 PM			
Sample ID: 1704842-24B MSD					SeqNo: 4384414			Prep Date: 4/18/2017		DF: 1	
Client ID: WG-017360-041317-MR-046					Run ID: SVMS5_170418A						
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	15.54	0.47	5.6	22.47	0	69.2	30-120	13.68	12.7	30	
2,4,5-Trichlorophenol	17.04	0.19	5.6	22.47	0	75.8	50-110	14.61	15.4	30	
2,4,6-Trichlorophenol	17.72	0.28	5.6	22.47	0	78.8	50-115	14.81	17.9	30	
2,4-Dichlorophenol	15.46	0.39	5.6	22.47	0	68.8	50-105	13.86	10.9	30	
2,4-Dimethylphenol	18.72	0.4	5.6	22.47	0	83.3	30-110	17.17	8.63	30	
2,4-Dinitrophenol	20.57	0.45	5.6	22.47	0	91.6	15-140	16.2	23.8	30	
2,4-Dinitrotoluene	15.8	0.47	5.6	22.47	0	70.3	50-120	13.39	16.5	30	
2,6-Dinitrotoluene	15.8	0.12	5.6	22.47	0	70.3	50-115	13.39	16.5	30	
2-Chloronaphthalene	14.99	0.084	5.6	22.47	0	66.7	50-105	12.55	17.7	30	
2-Chlorophenol	15.57	0.26	5.6	22.47	0	69.3	35-105	14.35	8.17	30	
2-Methylnaphthalene	15.1	0.073	5.6	22.47	0	67.2	45-105	13.49	11.3	30	
2-Methylphenol	16.56	0.28	5.6	22.47	0	73.7	40-110	15.02	9.76	30	
2-Nitroaniline	17.06	0.24	5.6	22.47	0	75.9	50-115	14.31	17.5	30	
2-Nitrophenol	13.19	0.38	5.6	22.47	0	58.7	40-115	12.07	8.88	30	
3&4-Methylphenol	16.21	0.24	5.6	22.47	0	72.2	30-110	14.38	12	30	
3,3'-Dichlorobenzidine	U	1.8	5.6	22.47	0	0	30-120	0.52	0	30	S
3-Nitroaniline	8.618	0.72	5.6	22.47	0	38.4	20-125	7.55	13.2	30	
4,6-Dinitro-2-methylphenol	13.52	0.3	5.6	22.47	0	60.2	40-130	10.83	22.1	30	
4-Bromophenyl phenyl ether	16.47	0.37	5.6	22.47	0	73.3	50-115	13.88	17.1	30	
4-Chloro-3-methylphenol	17.08	0.29	5.6	22.47	0	76	45-110	15.84	7.53	30	
4-Chloroaniline	9.73	0.38	5.6	22.47	0	43.3	15-110	9.28	4.74	30	
4-Chlorophenyl phenyl ether	16.57	0.35	5.6	22.47	0	73.8	50-110	14	16.8	30	
4-Nitroaniline	10.44	0.64	5.6	22.47	0	46.4	35-150	8.91	15.8	30	
4-Nitrophenol	8.18	0.27	5.6	22.47	0	36.4	1-58	7.87	3.86	30	
Acenaphthene	16.65	0.091	5.6	22.47	0	74.1	45-110	12.66	27.2	30	
Acenaphthylene	15.36	0.084	5.6	22.47	0	68.4	50-105	13	16.6	30	
Acetophenone	15.74	0.42	1.1	22.47	0	70	30-120	14.49	8.28	30	
Anthracene	17.7	0.031	5.6	22.47	0	78.8	55-110	14.41	20.5	30	
Atrazine	9.539	0.39	1.1	22.47	0	42.4	30-120	7.72	21.1	30	
Benzaldehyde	15.56	0.58	1.1	22.47	0	69.2	30-120	16.19	3.96	30	
Benzo(a)anthracene	16.2	0.025	5.6	22.47	0	72.1	55-110	14.41	11.7	30	
Benzo(a)pyrene	17.12	0.049	5.6	22.47	0	76.2	55-110	14.24	18.4	30	
Benzo(b)fluoranthene	17.35	0.057	5.6	22.47	0	77.2	45-120	14.54	17.6	30	
Benzo(g,h,i)perylene	15.85	0.034	5.6	22.47	0	70.6	40-125	12.78	21.5	30	
Benzo(k)fluoranthene	16.6	0.054	5.6	22.47	0	73.8	45-125	13.79	18.5	30	
Bis(2-chloroethoxy)methane	14.88	0.33	5.6	22.47	0	66.2	45-105	13.55	9.33	30	
Bis(2-chloroethyl)ether	15.03	0.42	5.6	22.47	0	66.9	35-110	15.97	6.04	30	
Bis(2-ethylhexyl)phthalate	15.66	0.45	5.6	22.47	0	69.7	40-125	13.77	12.9	30	
Butyl benzyl phthalate	16.58	0.34	5.6	22.47	0	73.8	45-115	15.8	4.84	30	
Carbazole	15.71	0.11	5.6	22.47	0	69.9	50-150	16.6	5.52	30	
Chrysene	15.22	0.054	5.6	22.47	0	67.8	55-110	13.14	14.7	30	
Dibenzo(a,h)anthracene	15.54	0.034	5.6	22.47	0	69.2	40-125	12.8	19.3	30	
Dibenzofuran	15.88	0.26	5.6	22.47	0	70.6	55-105	13.34	17.4	30	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: 100726		Instrument ID SVMS5		Method: SW846 8270D						
Diethyl phthalate	16.16	0.19	5.6	22.47	0	71.9	40-120	13.8	15.7	30
Dimethyl phthalate	15.84	0.2	5.6	22.47	0	70.5	25-125	13.25	17.8	30
Di-n-butyl phthalate	19.27	0.24	5.6	22.47	0	85.8	55-115	16.91	13	30
Di-n-octyl phthalate	19.21	0.17	5.6	22.47	0	85.5	35-135	16.32	16.3	30
Fluoranthene	15.6	0.043	5.6	22.47	0	69.4	55-115	13.54	14.1	30
Fluorene	16.42	0.057	5.6	22.47	0	73	50-110	13.83	17.1	30
Hexachlorobenzene	15.26	0.49	5.6	22.47	0	67.9	50-110	12.93	16.5	30
Hexachlorobutadiene	12.3	0.31	5.6	22.47	0	54.8	25-105	11.39	7.71	30
Hexachlorocyclopentadiene	11.65	1.2	5.6	22.47	0	51.8	25-105	9.84	16.9	30
Hexachloroethane	11.97	0.24	5.6	22.47	0	53.2	30-95	11.39	4.93	30
Indeno(1,2,3-cd)pyrene	16.52	0.075	5.6	22.47	0	73.5	45-125	14.21	15	30
Isophorone	16.46	0.38	5.6	22.47	0	73.2	50-110	14.24	14.5	30
Naphthalene	12.79	0.075	5.6	22.47	0	56.9	40-100	11.35	11.9	30
Nitrobenzene	12.82	0.29	5.6	22.47	0	57	45-110	12.01	6.53	30
N-Nitrosodi-n-propylamine	17.56	0.39	5.6	22.47	0	78.2	35-130	15.75	10.9	30
N-Nitrosodiphenylamine	15.93	0.26	5.6	22.47	0	70.9	50-110	13.43	17	30
Pentachlorophenol	19.16	1.1	5.6	22.47	0	85.2	40-115	16.91	12.5	30
Phenanthrene	15.24	0.034	5.6	22.47	0	67.8	50-115	12.64	18.6	30
Phenol	7.562	0.24	5.6	22.47	0	33.6	12-43	6.45	15.9	30
Pyrene	19.97	0.04	5.6	22.47	0	88.8	50-130	17.21	14.8	30
<i>Surr: 2,4,6-Tribromophenol</i>	38.08	0	0	56.18	0	67.8	38-115	32.28	16.5	40
<i>Surr: 2-Fluorobiphenyl</i>	37.25	0	0	56.18	0	66.3	32-100	31.61	16.4	40
<i>Surr: 2-Fluorophenol</i>	22.08	0	0	56.18	0	39.3	22-59	20.77	6.11	40
<i>Surr: 4-Terphenyl-d14</i>	47.72	0	0	56.18	0	84.9	23-112	42.63	11.3	40
<i>Surr: Nitrobenzene-d5</i>	33.94	0	0	56.18	0	60.4	31-93	31.62	7.09	40
<i>Surr: Phenol-d6</i>	18.24	0	0	56.18	0	32.5	13-36	16.27	11.4	40

The following samples were analyzed in this batch:

1704842-18B	1704842-19B	1704842-20B
1704842-21B	1704842-22B	1704842-23B
1704842-24B	1704842-25B	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209974** Instrument ID **VMS10** Method: **SW8260B**

MBLK		Sample ID: VLKW2-170417-R209974				Units: µg/L		Analysis Date: 4/18/2017 12:04 PM			
Client ID:		Run ID: VMS10_170417B				SeqNo: 4382071		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.36	1.0								
1,1,2,2-Tetrachloroethane	U	0.19	1.0								
1,1,2-Trichloroethane	U	0.4	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.42	1.0								
1,1-Dichloroethane	U	0.31	1.0								
1,1-Dichloroethene	U	0.28	1.0								
1,2,4-Trichlorobenzene	U	0.21	1.0								
1,2-Dibromo-3-chloropropane	U	0.97	1.0								
1,2-Dibromoethane	U	0.98	1.0								
1,2-Dichlorobenzene	U	0.22	1.0								
1,2-Dichloroethane	U	0.17	1.0								
1,2-Dichloropropane	U	0.25	1.0								
1,3-Dichlorobenzene	U	0.29	1.0								
1,4-Dichlorobenzene	U	0.21	1.0								
2-Butanone	U	0.58	5.0								
2-Hexanone	U	0.13	5.0								
4-Methyl-2-pentanone	U	0.11	1.0								
Acetone	U	0.92	10								
Benzene	U	0.3	1.0								
Bromodichloromethane	U	0.23	1.0								
Bromoform	U	0.77	1.0								
Bromomethane	U	0.38	1.0								
Carbon disulfide	U	0.23	1.0								
Carbon tetrachloride	U	0.31	1.0								
Chlorobenzene	U	0.27	1.0								
Chloroethane	U	0.29	1.0								
Chloroform	U	0.26	1.0								
Chloromethane	U	0.17	1.0								
cis-1,2-Dichloroethene	U	0.25	1.0								
cis-1,3-Dichloropropene	U	0.39	1.0								
Cyclohexane	U	0.22	1.0								
Dibromochloromethane	U	0.38	1.0								
Dichlorodifluoromethane	U	0.13	1.0								
Ethylbenzene	U	0.4	1.0								
Isopropylbenzene	U	0.31	1.0								
Methyl acetate	U	0.23	2.0								
Methyl tert-butyl ether	U	0.12	1.0								
Methylcyclohexane	U	0.27	1.0								
Methylene chloride	U	0.56	5.0								
Styrene	U	0.24	1.0								
Tetrachloroethene	U	0.27	1.0								
Toluene	U	0.37	1.0								
trans-1,2-Dichloroethene	U	0.28	1.0								

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209974		Instrument ID VMS10		Method: SW8260B	
trans-1,3-Dichloropropene	U	0.82	1.0		
Trichloroethene	U	0.3	1.0		
Trichlorofluoromethane	U	0.2	1.0		
Vinyl chloride	U	0.2	1.0		
Xylenes, Total	U	1.3	3.0		
Surr: 1,2-Dichloroethane-d4	19.58	0	0	20	0
Surr: 4-Bromofluorobenzene	18.49	0	0	20	0
Surr: Dibromofluoromethane	18.7	0	0	20	0
Surr: Toluene-d8	19.26	0	0	20	0

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209974** Instrument ID **VMS10** Method: **SW8260B**

LCS		Sample ID: VLCSW2-170417-R209974				Units: µg/L		Analysis Date: 4/17/2017 11:16 PM			
Client ID:		Run ID: VMS10_170417B				SeqNo: 4382041		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.57	0.36	1.0	20	0	103	75-130	0			
1,1,2,2-Tetrachloroethane	18.68	0.19	1.0	20	0	93.4	75-130	0			
1,1,2-Trichloroethane	19.22	0.4	1.0	20	0	96.1	75-125	0			
1,1-Dichloroethane	21.98	0.31	1.0	20	0	110	75-133	0			
1,1-Dichloroethene	22.93	0.28	1.0	20	0	115	70-145	0			
1,2,4-Trichlorobenzene	18.99	0.21	1.0	20	0	95	70-135	0			
1,2-Dibromo-3-chloropropane	17.73	0.97	1.0	20	0	88.6	60-130	0			
1,2-Dibromoethane	23.79	0.98	1.0	20	0	119	90-195	0			
1,2-Dichlorobenzene	20	0.22	1.0	20	0	100	70-130	0			
1,2-Dichloroethane	19.69	0.17	1.0	20	0	98.4	78-125	0			
1,2-Dichloropropane	18.86	0.25	1.0	20	0	94.3	75-125	0			
1,3-Dichlorobenzene	20.56	0.29	1.0	20	0	103	75-130	0			
1,4-Dichlorobenzene	20.01	0.21	1.0	20	0	100	75-130	0			
2-Butanone	20.44	0.58	5.0	20	0	102	55-150	0			
2-Hexanone	19.51	0.13	5.0	20	0	97.6	60-135	0			
4-Methyl-2-pentanone	23.82	0.11	1.0	20	0	119	77-178	0			
Acetone	19.29	0.92	10	20	0	96.4	60-160	0			
Benzene	20.92	0.3	1.0	20	0	105	85-125	0			
Bromodichloromethane	18.91	0.23	1.0	20	0	94.6	75-125	0			
Bromoform	16.9	0.77	1.0	20	0	84.5	60-125	0			
Bromomethane	18.16	0.38	1.0	20	0	90.8	30-185	0			
Carbon disulfide	25.74	0.23	1.0	20	0	129	60-165	0			
Carbon tetrachloride	20.45	0.31	1.0	20	0	102	65-140	0			
Chlorobenzene	19.65	0.27	1.0	20	0	98.2	80-120	0			
Chloroethane	20.68	0.29	1.0	20	0	103	50-140	0			
Chloroform	21.03	0.26	1.0	20	0	105	80-130	0			
Chloromethane	20.24	0.17	1.0	20	0	101	46-148	0			
cis-1,2-Dichloroethene	21.34	0.25	1.0	20	0	107	75-134	0			
cis-1,3-Dichloropropene	17.99	0.39	1.0	20	0	90	70-130	0			
Dibromochloromethane	17.12	0.38	1.0	20	0	85.6	60-115	0			
Dichlorodifluoromethane	23.64	0.13	1.0	20	0	118	20-120	0			
Ethylbenzene	19.68	0.4	1.0	20	0	98.4	85-125	0			
Isopropylbenzene	20.02	0.31	1.0	20	0	100	80-127	0			
Methyl tert-butyl ether	21.25	0.12	1.0	20	0	106	80-130	0			
Methylene chloride	22.09	0.56	5.0	20	0	110	75-140	0			
Styrene	19.82	0.24	1.0	20	0	99.1	83-137	0			
Tetrachloroethene	24.95	0.27	1.0	20	0	125	68-166	0			
Toluene	19.65	0.37	1.0	20	0	98.2	85-125	0			
trans-1,2-Dichloroethene	22.42	0.28	1.0	20	0	112	80-140	0			
trans-1,3-Dichloropropene	17.04	0.82	1.0	20	0	85.2	56-132	0			
Trichloroethene	20.46	0.3	1.0	20	0	102	84-130	0			
Trichlorofluoromethane	18.24	0.2	1.0	20	0	91.2	60-140	0			
Vinyl chloride	20.11	0.2	1.0	20	0	101	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209974		Instrument ID VMS10		Method: SW8260B					
Xylenes, Total	59.48	1.3	3.0	60	0	99.1	80-126	0	
Surr: 1,2-Dichloroethane-d4	18.23	0	0	20	0	91.2	75-120	0	
Surr: 4-Bromofluorobenzene	20.89	0	0	20	0	104	80-110	0	
Surr: Dibromofluoromethane	18.25	0	0	20	0	91.2	85-115	0	
Surr: Toluene-d8	20.1	0	0	20	0	100	85-110	0	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209974** Instrument ID **VMS10** Method: **SW8260B**

MS					Sample ID: 1704866-02A MS			Units: µg/L		Analysis Date: 4/18/2017 08:24 AM		
Client ID:					Run ID: VMS10_170417B			SeqNo: 4382069		Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	20.96	0.36	1.0	20	0	105	75-130	0				
1,1,2,2-Tetrachloroethane	17.73	0.19	1.0	20	0	88.6	75-130	0				
1,1,2-Trichloroethane	18.65	0.4	1.0	20	0	93.2	75-125	0				
1,1-Dichloroethane	23.08	0.31	1.0	20	0	115	75-133	0				
1,1-Dichloroethene	22.88	0.28	1.0	20	0	114	70-145	0				
1,2,4-Trichlorobenzene	14.89	0.21	1.0	20	0	74.4	70-135	0				
1,2-Dibromo-3-chloropropane	14.89	0.97	1.0	20	0	74.4	60-130	0				
1,2-Dibromoethane	22.22	0.98	1.0	20	0	111	90-195	0				
1,2-Dichlorobenzene	16.86	0.22	1.0	20	0	84.3	70-130	0				
1,2-Dichloroethane	19.83	0.17	1.0	20	0	99.2	78-125	0				
1,2-Dichloropropane	18.75	0.25	1.0	20	0	93.8	75-125	0				
1,3-Dichlorobenzene	17.3	0.29	1.0	20	0	86.5	75-130	0				
1,4-Dichlorobenzene	17.43	0.21	1.0	20	0	87.2	75-130	0				
2-Butanone	18.06	0.58	5.0	20	0	90.3	55-150	0				
2-Hexanone	16.95	0.13	5.0	20	0	84.8	60-135	0				
4-Methyl-2-pentanone	20.25	0.11	1.0	20	0	101	77-178	0				
Acetone	21.24	0.92	10	20	0	106	60-160	0				
Benzene	20.48	0.3	1.0	20	0	102	85-125	0				
Bromodichloromethane	19.35	0.23	1.0	20	0	96.8	75-125	0				
Bromoform	15.82	0.77	1.0	20	0	79.1	60-125	0				
Bromomethane	17.6	0.38	1.0	20	0	88	30-185	0				
Carbon disulfide	34.27	0.23	1.0	20	0	171	60-165	0			S	
Carbon tetrachloride	21.18	0.31	1.0	20	0	106	65-140	0				
Chlorobenzene	17.67	0.27	1.0	20	0	88.4	80-120	0				
Chloroethane	21.36	0.29	1.0	20	0	107	50-140	0				
Chloroform	21.34	0.26	1.0	20	0	107	80-130	0				
Chloromethane	20.15	0.17	1.0	20	0	101	46-148	0				
cis-1,2-Dichloroethene	19.97	0.25	1.0	20	0	99.8	75-134	0				
cis-1,3-Dichloropropene	15.71	0.39	1.0	20	0	78.6	70-130	0				
Dibromochloromethane	16.42	0.38	1.0	20	0	82.1	60-115	0				
Dichlorodifluoromethane	24.73	0.13	1.0	20	0	124	20-120	0			S	
Ethylbenzene	17.27	0.4	1.0	20	0	86.4	85-125	0				
Isopropylbenzene	17.48	0.31	1.0	20	0	87.4	80-127	0				
Methyl tert-butyl ether	19.7	0.12	1.0	20	1.68	90.1	80-130	0				
Methylene chloride	23.24	0.56	5.0	20	0	116	75-140	0				
Styrene	17.85	0.24	1.0	20	0	89.2	83-137	0				
Tetrachloroethene	24.96	0.27	1.0	20	0	125	68-166	0				
Toluene	18.12	0.37	1.0	20	0	90.6	85-125	0				
trans-1,2-Dichloroethene	22.47	0.28	1.0	20	0	112	80-140	0				
trans-1,3-Dichloropropene	14.44	0.82	1.0	20	0	72.2	56-132	0				
Trichloroethene	20.26	0.3	1.0	20	0	101	84-130	0				
Trichlorofluoromethane	18.65	0.2	1.0	20	0	93.2	60-140	0				
Vinyl chloride	20.41	0.2	1.0	20	0	102	50-136	0				

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209974		Instrument ID VMS10		Method: SW8260B					
Xylenes, Total	52.58	1.3	3.0	60	0	87.6	80-126	0	
Surr: 1,2-Dichloroethane-d4	20.46	0	0	20	0	102	75-120	0	
Surr: 4-Bromofluorobenzene	20.83	0	0	20	0	104	80-110	0	
Surr: Dibromofluoromethane	20.34	0	0	20	0	102	85-115	0	
Surr: Toluene-d8	19.85	0	0	20	0	99.2	85-110	0	

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

Client: GHD Services Inc.
 Work Order: 1704842
 Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209974** Instrument ID **VMS10** Method: **SW8260B**

MSD					Sample ID: 1704866-02A MSD			Units: µg/L		Analysis Date: 4/18/2017 08:48 AM		
Client ID:		Run ID: VMS10_170417B			SeqNo: 4382070			Prep Date:		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	21.67	0.36	1.0	20	0	108	75-130	20.96	3.33	30		
1,1,2,2-Tetrachloroethane	18.26	0.19	1.0	20	0	91.3	75-130	17.73	2.95	30		
1,1,2-Trichloroethane	19.25	0.4	1.0	20	0	96.2	75-125	18.65	3.17	30		
1,1-Dichloroethane	23.25	0.31	1.0	20	0	116	75-133	23.08	0.734	30		
1,1-Dichloroethene	24.6	0.28	1.0	20	0	123	70-145	22.88	7.25	30		
1,2,4-Trichlorobenzene	15.43	0.21	1.0	20	0	77.2	70-135	14.89	3.56	30		
1,2-Dibromo-3-chloropropane	15.77	0.97	1.0	20	0	78.8	60-130	14.89	5.74	30		
1,2-Dibromoethane	22.09	0.98	1.0	20	0	110	90-195	22.22	0.587	30		
1,2-Dichlorobenzene	17.86	0.22	1.0	20	0	89.3	70-130	16.86	5.76	30		
1,2-Dichloroethane	20.27	0.17	1.0	20	0	101	78-125	19.83	2.19	30		
1,2-Dichloropropane	19.44	0.25	1.0	20	0	97.2	75-125	18.75	3.61	30		
1,3-Dichlorobenzene	18.02	0.29	1.0	20	0	90.1	75-130	17.3	4.08	30		
1,4-Dichlorobenzene	18	0.21	1.0	20	0	90	75-130	17.43	3.22	30		
2-Butanone	19.46	0.58	5.0	20	0	97.3	55-150	18.06	7.46	30		
2-Hexanone	17.34	0.13	5.0	20	0	86.7	60-135	16.95	2.27	30		
4-Methyl-2-pentanone	20.95	0.11	1.0	20	0	105	77-178	20.25	3.4	30		
Acetone	22.6	0.92	10	20	0	113	60-160	21.24	6.2	30		
Benzene	20.94	0.3	1.0	20	0	105	85-125	20.48	2.22	30		
Bromodichloromethane	19.63	0.23	1.0	20	0	98.2	75-125	19.35	1.44	30		
Bromoform	15.89	0.77	1.0	20	0	79.4	60-125	15.82	0.442	30		
Bromomethane	18.04	0.38	1.0	20	0	90.2	30-185	17.6	2.47	30		
Carbon disulfide	26.84	0.23	1.0	20	0	134	60-165	34.27	24.3	30		
Carbon tetrachloride	22.03	0.31	1.0	20	0	110	65-140	21.18	3.93	30		
Chlorobenzene	18.34	0.27	1.0	20	0	91.7	80-120	17.67	3.72	30		
Chloroethane	21.99	0.29	1.0	20	0	110	50-140	21.36	2.91	30		
Chloroform	21.67	0.26	1.0	20	0	108	80-130	21.34	1.53	30		
Chloromethane	21.11	0.17	1.0	20	0	106	46-148	20.15	4.65	30		
cis-1,2-Dichloroethene	20.76	0.25	1.0	20	0	104	75-134	19.97	3.88	30		
cis-1,3-Dichloropropene	16.05	0.39	1.0	20	0	80.2	70-130	15.71	2.14	30		
Dibromochloromethane	16.46	0.38	1.0	20	0	82.3	60-115	16.42	0.243	30		
Dichlorodifluoromethane	25.58	0.13	1.0	20	0	128	20-120	24.73	3.38	30	S	
Ethylbenzene	17.9	0.4	1.0	20	0	89.5	85-125	17.27	3.58	30		
Isopropylbenzene	18.09	0.31	1.0	20	0	90.4	80-127	17.48	3.43	30		
Methyl tert-butyl ether	20.27	0.12	1.0	20	1.68	93	80-130	19.7	2.85	30		
Methylene chloride	23.43	0.56	5.0	20	0	117	75-140	23.24	0.814	30		
Styrene	18.2	0.24	1.0	20	0	91	83-137	17.85	1.94	30		
Tetrachloroethene	25.72	0.27	1.0	20	0	129	68-166	24.96	3	30		
Toluene	18.64	0.37	1.0	20	0	93.2	85-125	18.12	2.83	30		
trans-1,2-Dichloroethene	23.21	0.28	1.0	20	0	116	80-140	22.47	3.24	30		
trans-1,3-Dichloropropene	14.47	0.82	1.0	20	0	72.4	56-132	14.44	0.208	30		
Trichloroethene	21.12	0.3	1.0	20	0	106	84-130	20.26	4.16	30		
Trichlorofluoromethane	20.23	0.2	1.0	20	0	101	60-140	18.65	8.13	30		
Vinyl chloride	21.24	0.2	1.0	20	0	106	50-136	20.41	3.99	30		

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209974	Instrument ID VMS10	Method: SW8260B								
Xylenes, Total	54.82	1.3	3.0	60	0	91.4	80-126	52.58	4.17	30
Surr: 1,2-Dichloroethane-d4	20.49	0	0	20	0	102	75-120	20.46	0.147	30
Surr: 4-Bromofluorobenzene	20.64	0	0	20	0	103	80-110	20.83	0.916	30
Surr: Dibromofluoromethane	20.42	0	0	20	0	102	85-115	20.34	0.393	30
Surr: Toluene-d8	20.2	0	0	20	0	101	85-110	19.85	1.75	30

The following samples were analyzed in this batch:

1704842-01A	1704842-02A	1704842-03A
1704842-04A	1704842-05A	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209993** Instrument ID **VMS7** Method: **SW8260B**

MBLK		Sample ID: VLKW1-170418-R209993				Units: µg/L		Analysis Date: 4/18/2017 11:44 AM			
Client ID:		Run ID: VMS7_170418A				SeqNo: 4384145		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.36	1.0								
1,1,2,2-Tetrachloroethane	U	0.19	1.0								
1,1,2-Trichloroethane	U	0.4	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.42	1.0								
1,1-Dichloroethane	U	0.31	1.0								
1,1-Dichloroethene	U	0.28	1.0								
1,2,4-Trichlorobenzene	U	0.21	1.0								
1,2-Dibromo-3-chloropropane	U	0.97	1.0								
1,2-Dibromoethane	U	0.98	1.0								
1,2-Dichlorobenzene	U	0.22	1.0								
1,2-Dichloroethane	U	0.17	1.0								
1,2-Dichloropropane	U	0.25	1.0								
1,3-Dichlorobenzene	U	0.29	1.0								
1,4-Dichlorobenzene	U	0.21	1.0								
2-Butanone	U	0.58	5.0								
2-Hexanone	U	0.13	5.0								
4-Methyl-2-pentanone	U	0.11	1.0								
Acetone	U	0.92	10								
Benzene	U	0.3	1.0								
Bromodichloromethane	U	0.23	1.0								
Bromoform	U	0.77	1.0								
Bromomethane	U	0.38	1.0								
Carbon disulfide	U	0.23	1.0								
Carbon tetrachloride	U	0.31	1.0								
Chlorobenzene	U	0.27	1.0								
Chloroethane	U	0.29	1.0								
Chloroform	U	0.26	1.0								
Chloromethane	U	0.17	1.0								
cis-1,2-Dichloroethene	U	0.25	1.0								
cis-1,3-Dichloropropene	U	0.39	1.0								
Cyclohexane	U	0.22	1.0								
Dibromochloromethane	U	0.38	1.0								
Dichlorodifluoromethane	U	0.13	1.0								
Ethylbenzene	U	0.4	1.0								
Isopropylbenzene	U	0.31	1.0								
Methyl acetate	U	0.23	2.0								
Methyl tert-butyl ether	U	0.12	1.0								
Methylcyclohexane	U	0.27	1.0								
Methylene chloride	U	0.56	5.0								
Styrene	U	0.24	1.0								
Tetrachloroethene	U	0.27	1.0								
Toluene	U	0.37	1.0								
trans-1,2-Dichloroethene	U	0.28	1.0								

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209993	Instrument ID VMS7	Method: SW8260B							
trans-1,3-Dichloropropene	U	0.82	1.0						
Trichloroethene	U	0.3	1.0						
Trichlorofluoromethane	U	0.2	1.0						
Vinyl chloride	U	0.2	1.0						
Xylenes, Total	U	1.3	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.16</i>	0	0	20	0	101	75-120	0	
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.48</i>	0	0	20	0	97.4	80-110	0	
<i>Surr: Dibromofluoromethane</i>	<i>19.54</i>	0	0	20	0	97.7	85-115	0	
<i>Surr: Toluene-d8</i>	<i>19.19</i>	0	0	20	0	96	85-110	0	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209993** Instrument ID **VMS7** Method: **SW8260B**

LCS		Sample ID: VLCSW1-170418-R209993				Units: µg/L		Analysis Date: 4/18/2017 10:41 AM			
Client ID:		Run ID: VMS7_170418A				SeqNo: 4384144		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.88	0.36	1.0	20	0	104	75-130	0			
1,1,2,2-Tetrachloroethane	19.69	0.19	1.0	20	0	98.4	75-130	0			
1,1,2-Trichloroethane	20.39	0.4	1.0	20	0	102	75-125	0			
1,1-Dichloroethane	23.51	0.31	1.0	20	0	118	75-133	0			
1,1-Dichloroethene	21.27	0.28	1.0	20	0	106	70-145	0			
1,2,4-Trichlorobenzene	18.62	0.21	1.0	20	0	93.1	70-135	0			
1,2-Dibromo-3-chloropropane	14.83	0.97	1.0	20	0	74.2	60-130	0			
1,2-Dibromoethane	20.83	0.98	1.0	20	0	104	90-195	0			
1,2-Dichlorobenzene	18.77	0.22	1.0	20	0	93.8	70-130	0			
1,2-Dichloroethane	19.84	0.17	1.0	20	0	99.2	78-125	0			
1,2-Dichloropropane	19.94	0.25	1.0	20	0	99.7	75-125	0			
1,3-Dichlorobenzene	19.43	0.29	1.0	20	0	97.2	75-130	0			
1,4-Dichlorobenzene	18.94	0.21	1.0	20	0	94.7	75-130	0			
2-Butanone	21.24	0.58	5.0	20	0	106	55-150	0			
2-Hexanone	18.13	0.13	5.0	20	0	90.6	60-135	0			
4-Methyl-2-pentanone	23.94	0.11	1.0	20	0	120	77-178	0			
Acetone	17.95	0.92	10	20	0	89.8	60-160	0			
Benzene	21.01	0.3	1.0	20	0	105	85-125	0			
Bromodichloromethane	19.4	0.23	1.0	20	0	97	75-125	0			
Bromoform	16.17	0.77	1.0	20	0	80.8	60-125	0			
Bromomethane	18.77	0.38	1.0	20	0	93.8	30-185	0			
Carbon disulfide	21.57	0.23	1.0	20	0	108	60-165	0			
Carbon tetrachloride	18.81	0.31	1.0	20	0	94	65-140	0			
Chlorobenzene	19.74	0.27	1.0	20	0	98.7	80-120	0			
Chloroethane	21.3	0.29	1.0	20	0	106	50-140	0			
Chloroform	19.44	0.26	1.0	20	0	97.2	80-130	0			
Chloromethane	17.93	0.17	1.0	20	0	89.6	46-148	0			
cis-1,2-Dichloroethene	23.06	0.25	1.0	20	0	115	75-134	0			
cis-1,3-Dichloropropene	17.87	0.39	1.0	20	0	89.4	70-130	0			
Dibromochloromethane	16.72	0.38	1.0	20	0	83.6	60-115	0			
Dichlorodifluoromethane	20.18	0.13	1.0	20	0	101	20-120	0			
Ethylbenzene	20.35	0.4	1.0	20	0	102	85-125	0			
Isopropylbenzene	20.31	0.31	1.0	20	0	102	80-127	0			
Methyl tert-butyl ether	19.1	0.12	1.0	20	0	95.5	80-130	0			
Methylene chloride	20.28	0.56	5.0	20	0	101	75-140	0			
Styrene	20.87	0.24	1.0	20	0	104	83-137	0			
Tetrachloroethene	21.53	0.27	1.0	20	0	108	68-166	0			
Toluene	20.22	0.37	1.0	20	0	101	85-125	0			
trans-1,2-Dichloroethene	21.12	0.28	1.0	20	0	106	80-140	0			
trans-1,3-Dichloropropene	16.84	0.82	1.0	20	0	84.2	56-132	0			
Trichloroethene	19.89	0.3	1.0	20	0	99.4	84-130	0			
Trichlorofluoromethane	20.81	0.2	1.0	20	0	104	60-140	0			
Vinyl chloride	19.76	0.2	1.0	20	0	98.8	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209993		Instrument ID VMS7		Method: SW8260B					
Xylenes, Total	60.06	1.3	3.0	60	0	100	80-126	0	
Surr: 1,2-Dichloroethane-d4	20.5	0	0	20	0	102	75-120	0	
Surr: 4-Bromofluorobenzene	20.11	0	0	20	0	101	80-110	0	
Surr: Dibromofluoromethane	19.85	0	0	20	0	99.2	85-115	0	
Surr: Toluene-d8	19.98	0	0	20	0	99.9	85-110	0	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209993** Instrument ID **VMS7** Method: **SW8260B**

MS					Sample ID: 1704842-17A MS			Units: µg/L		Analysis Date: 4/18/2017 07:45 PM		
Client ID: WG-017360-041217-MR-039					Run ID: VMS7_170418A			SeqNo: 4384166		Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	22.85	0.36	1.0	20	0	114	75-130	0				
1,1,2,2-Tetrachloroethane	23.68	0.19	1.0	20	0	118	75-130	0				
1,1,2-Trichloroethane	22.92	0.4	1.0	20	0	115	75-125	0				
1,1-Dichloroethane	20.9	0.31	1.0	20	0	104	75-133	0				
1,1-Dichloroethene	23.33	0.28	1.0	20	0	117	70-145	0				
1,2,4-Trichlorobenzene	20.8	0.21	1.0	20	0	104	70-135	0				
1,2-Dibromo-3-chloropropane	20.23	0.97	1.0	20	0	101	60-130	0				
1,2-Dibromoethane	23.42	0.98	1.0	20	0	117	90-195	0				
1,2-Dichlorobenzene	21.46	0.22	1.0	20	0	107	70-130	0				
1,2-Dichloroethane	21.89	0.17	1.0	20	0	109	78-125	0				
1,2-Dichloropropane	21.71	0.25	1.0	20	0	109	75-125	0				
1,3-Dichlorobenzene	22.37	0.29	1.0	20	0	112	75-130	0				
1,4-Dichlorobenzene	22.05	0.21	1.0	20	0	110	75-130	0				
2-Butanone	23.75	0.58	5.0	20	0	119	55-150	0				
2-Hexanone	24.85	0.13	5.0	20	0	124	60-135	0				
4-Methyl-2-pentanone	30.35	0.11	1.0	20	0	152	77-178	0				
Acetone	27.66	0.92	10	20	0	138	60-160	0				
Benzene	22.66	0.3	1.0	20	0	113	85-125	0				
Bromodichloromethane	21.52	0.23	1.0	20	0	108	75-125	0				
Bromoform	17.13	0.77	1.0	20	0	85.6	60-125	0				
Bromomethane	18.78	0.38	1.0	20	0	93.9	30-185	0				
Carbon disulfide	22.29	0.23	1.0	20	0	111	60-165	0				
Carbon tetrachloride	20.11	0.31	1.0	20	0	101	65-140	0				
Chlorobenzene	22.26	0.27	1.0	20	0	111	80-120	0				
Chloroethane	20.78	0.29	1.0	20	0	104	50-140	0				
Chloroform	22.06	0.26	1.0	20	0	110	80-130	0				
Chloromethane	16.58	0.17	1.0	20	0	82.9	46-148	0				
cis-1,2-Dichloroethene	22.23	0.25	1.0	20	0	111	75-134	0				
cis-1,3-Dichloropropene	18.98	0.39	1.0	20	0	94.9	70-130	0				
Dibromochloromethane	17.71	0.38	1.0	20	0	88.6	60-115	0				
Dichlorodifluoromethane	18.9	0.13	1.0	20	0	94.5	20-120	0				
Ethylbenzene	23.03	0.4	1.0	20	0	115	85-125	0				
Isopropylbenzene	23.03	0.31	1.0	20	0	115	80-127	0				
Methyl tert-butyl ether	18.07	0.12	1.0	20	0	90.4	80-130	0				
Methylene chloride	19.27	0.56	5.0	20	0	96.4	75-140	0				
Styrene	23.24	0.24	1.0	20	0	116	83-137	0				
Tetrachloroethene	27.71	0.27	1.0	20	3.98	119	68-166	0				
Toluene	22.33	0.37	1.0	20	0	112	85-125	0				
trans-1,2-Dichloroethene	18.06	0.28	1.0	20	0	90.3	80-140	0				
trans-1,3-Dichloropropene	17.44	0.82	1.0	20	0	87.2	56-132	0				
Trichloroethene	22.8	0.3	1.0	20	0	114	84-130	0				
Trichlorofluoromethane	21.55	0.2	1.0	20	0	108	60-140	0				
Vinyl chloride	18.32	0.2	1.0	20	0	91.6	50-136	0				

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209993		Instrument ID VMS7		Method: SW8260B					
Xylenes, Total	68.21	1.3	3.0	60	0	114	80-126	0	
Surr: 1,2-Dichloroethane-d4	19.79	0	0	20	0	99	75-120	0	
Surr: 4-Bromofluorobenzene	19.45	0	0	20	0	97.2	80-110	0	
Surr: Dibromofluoromethane	20.2	0	0	20	0	101	85-115	0	
Surr: Toluene-d8	19.22	0	0	20	0	96.1	85-110	0	

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

Client: GHD Services Inc.
 Work Order: 1704842
 Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R209993** Instrument ID **VMS7** Method: **SW8260B**

MSD					Sample ID: 1704842-17A MSD			Units: µg/L		Analysis Date: 4/18/2017 08:06 PM		
Client ID: WG-017360-041217-MR-039					Run ID: VMS7_170418A			SeqNo: 4384167		Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	22.17	0.36	1.0	20	0	111	75-130	22.85	3.02	30		
1,1,2,2-Tetrachloroethane	22.93	0.19	1.0	20	0	115	75-130	23.68	3.22	30		
1,1,2-Trichloroethane	21.83	0.4	1.0	20	0	109	75-125	22.92	4.87	30		
1,1-Dichloroethane	20.2	0.31	1.0	20	0	101	75-133	20.9	3.41	30		
1,1-Dichloroethene	22.8	0.28	1.0	20	0	114	70-145	23.33	2.3	30		
1,2,4-Trichlorobenzene	19.43	0.21	1.0	20	0	97.2	70-135	20.8	6.81	30		
1,2-Dibromo-3-chloropropane	18.49	0.97	1.0	20	0	92.4	60-130	20.23	8.99	30		
1,2-Dibromoethane	22.74	0.98	1.0	20	0	114	90-195	23.42	2.95	30		
1,2-Dichlorobenzene	20.21	0.22	1.0	20	0	101	70-130	21.46	6	30		
1,2-Dichloroethane	21.31	0.17	1.0	20	0	107	78-125	21.89	2.69	30		
1,2-Dichloropropane	21.07	0.25	1.0	20	0	105	75-125	21.71	2.99	30		
1,3-Dichlorobenzene	20.78	0.29	1.0	20	0	104	75-130	22.37	7.37	30		
1,4-Dichlorobenzene	20.99	0.21	1.0	20	0	105	75-130	22.05	4.93	30		
2-Butanone	23.44	0.58	5.0	20	0	117	55-150	23.75	1.31	30		
2-Hexanone	24.08	0.13	5.0	20	0	120	60-135	24.85	3.15	30		
4-Methyl-2-pentanone	29.45	0.11	1.0	20	0	147	77-178	30.35	3.01	30		
Acetone	26.72	0.92	10	20	0	134	60-160	27.66	3.46	30		
Benzene	21.74	0.3	1.0	20	0	109	85-125	22.66	4.14	30		
Bromodichloromethane	20.15	0.23	1.0	20	0	101	75-125	21.52	6.58	30		
Bromoform	17.07	0.77	1.0	20	0	85.4	60-125	17.13	0.351	30		
Bromomethane	17.43	0.38	1.0	20	0	87.2	30-185	18.78	7.46	30		
Carbon disulfide	23.67	0.23	1.0	20	0	118	60-165	22.29	6.01	30		
Carbon tetrachloride	19.84	0.31	1.0	20	0	99.2	65-140	20.11	1.35	30		
Chlorobenzene	21.59	0.27	1.0	20	0	108	80-120	22.26	3.06	30		
Chloroethane	21.55	0.29	1.0	20	0	108	50-140	20.78	3.64	30		
Chloroform	21.24	0.26	1.0	20	0	106	80-130	22.06	3.79	30		
Chloromethane	15.72	0.17	1.0	20	0	78.6	46-148	16.58	5.33	30		
cis-1,2-Dichloroethene	21.52	0.25	1.0	20	0	108	75-134	22.23	3.25	30		
cis-1,3-Dichloropropene	18.32	0.39	1.0	20	0	91.6	70-130	18.98	3.54	30		
Dibromochloromethane	17.04	0.38	1.0	20	0	85.2	60-115	17.71	3.86	30		
Dichlorodifluoromethane	19.05	0.13	1.0	20	0	95.2	20-120	18.9	0.791	30		
Ethylbenzene	22.45	0.4	1.0	20	0	112	85-125	23.03	2.55	30		
Isopropylbenzene	22.19	0.31	1.0	20	0	111	80-127	23.03	3.72	30		
Methyl tert-butyl ether	17.93	0.12	1.0	20	0	89.6	80-130	18.07	0.778	30		
Methylene chloride	22.67	0.56	5.0	20	0	113	75-140	19.27	16.2	30		
Styrene	22.63	0.24	1.0	20	0	113	83-137	23.24	2.66	30		
Tetrachloroethene	27.13	0.27	1.0	20	3.98	116	68-166	27.71	2.12	30		
Toluene	21.3	0.37	1.0	20	0	106	85-125	22.33	4.72	30		
trans-1,2-Dichloroethene	17.44	0.28	1.0	20	0	87.2	80-140	18.06	3.49	30		
trans-1,3-Dichloropropene	17.18	0.82	1.0	20	0	85.9	56-132	17.44	1.5	30		
Trichloroethene	22.53	0.3	1.0	20	0	113	84-130	22.8	1.19	30		
Trichlorofluoromethane	20.85	0.2	1.0	20	0	104	60-140	21.55	3.3	30		
Vinyl chloride	18.48	0.2	1.0	20	0	92.4	50-136	18.32	0.87	30		

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R209993		Instrument ID VMS7			Method: SW8260B					
Xylenes, Total	65.84	1.3	3.0	60	0	110	80-126	68.21	3.54	30
Surr: 1,2-Dichloroethane-d4	20.09	0	0	20	0	100	75-120	19.79	1.5	30
Surr: 4-Bromofluorobenzene	19.54	0	0	20	0	97.7	80-110	19.45	0.462	30
Surr: Dibromofluoromethane	20.04	0	0	20	0	100	85-115	20.2	0.795	30
Surr: Toluene-d8	19.81	0	0	20	0	99	85-110	19.22	3.02	30

The following samples were analyzed in this batch:

1704842-06A	1704842-07A	1704842-08A
1704842-09A	1704842-10A	1704842-11A
1704842-12A	1704842-13A	1704842-14A
1704842-15A	1704842-16A	1704842-17A
1704842-18A	1704842-26A	

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R210092a** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: VLKW2-170418-R210092a				Units: µg/L		Analysis Date: 4/18/2017 10:54 PM			
Client ID:		Run ID: VMS6_170418B				SeqNo: 4384518		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.36	1.0								
1,1,2,2-Tetrachloroethane	U	0.19	1.0								
1,1,2-Trichloroethane	U	0.4	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.42	1.0								
1,1-Dichloroethane	U	0.31	1.0								
1,1-Dichloroethene	U	0.28	1.0								
1,2,4-Trichlorobenzene	U	0.21	1.0								
1,2-Dibromo-3-chloropropane	U	0.97	1.0								
1,2-Dibromoethane	U	0.98	1.0								
1,2-Dichlorobenzene	U	0.22	1.0								
1,2-Dichloroethane	U	0.17	1.0								
1,2-Dichloropropane	U	0.25	1.0								
1,3-Dichlorobenzene	U	0.29	1.0								
1,4-Dichlorobenzene	U	0.21	1.0								
2-Butanone	U	0.58	5.0								
2-Hexanone	U	0.13	5.0								
4-Methyl-2-pentanone	U	0.11	1.0								
Acetone	U	0.92	10								
Benzene	U	0.3	1.0								
Bromodichloromethane	U	0.23	1.0								
Bromoform	U	0.77	1.0								
Bromomethane	U	0.38	1.0								
Carbon disulfide	U	0.23	1.0								
Carbon tetrachloride	U	0.31	1.0								
Chlorobenzene	U	0.27	1.0								
Chloroethane	U	0.29	1.0								
Chloroform	U	0.26	1.0								
Chloromethane	U	0.17	1.0								
cis-1,2-Dichloroethene	U	0.25	1.0								
cis-1,3-Dichloropropene	U	0.39	1.0								
Cyclohexane	U	0.22	1.0								
Dibromochloromethane	U	0.38	1.0								
Dichlorodifluoromethane	U	0.13	1.0								
Ethylbenzene	U	0.4	1.0								
Isopropylbenzene	U	0.31	1.0								
Methyl acetate	U	0.23	2.0								
Methyl tert-butyl ether	U	0.12	1.0								
Methylcyclohexane	U	0.27	1.0								
Methylene chloride	U	0.56	5.0								
Styrene	U	0.24	1.0								
Tetrachloroethene	U	0.27	1.0								
Toluene	U	0.37	1.0								
trans-1,2-Dichloroethene	U	0.28	1.0								

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R210092a		Instrument ID VMS6		Method: SW8260B	
trans-1,3-Dichloropropene	U	0.82	1.0		
Trichloroethene	U	0.3	1.0		
Trichlorofluoromethane	U	0.2	1.0		
Vinyl chloride	U	0.2	1.0		
Xylenes, Total	U	1.3	3.0		
Surr: 1,2-Dichloroethane-d4	20.17	0	0	20	0 101 75-120 0
Surr: 4-Bromofluorobenzene	19.89	0	0	20	0 99.4 80-110 0
Surr: Dibromofluoromethane	18.99	0	0	20	0 95 85-115 0
Surr: Toluene-d8	19.28	0	0	20	0 96.4 85-110 0

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R210092a** Instrument ID **VMS6** Method: **SW8260B**

LCS		Sample ID: VLCSW2-170418-R210092a				Units: µg/L		Analysis Date: 4/18/2017 10:02 PM			
Client ID:		Run ID: VMS6_170418B				SeqNo: 4384514		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.2	0.36	1.0	20	0	111	75-130	0			
1,1,2,2-Tetrachloroethane	21.73	0.19	1.0	20	0	109	75-130	0			
1,1,2-Trichloroethane	20.67	0.4	1.0	20	0	103	75-125	0			
1,1-Dichloroethane	25.17	0.31	1.0	20	0	126	75-133	0			
1,1-Dichloroethene	25.04	0.28	1.0	20	0	125	70-145	0			
1,2,4-Trichlorobenzene	21.01	0.21	1.0	20	0	105	70-135	0			
1,2-Dibromo-3-chloropropane	18.56	0.97	1.0	20	0	92.8	60-130	0			
1,2-Dibromoethane	21.96	0.98	1.0	20	0	110	90-195	0			
1,2-Dichlorobenzene	19.54	0.22	1.0	20	0	97.7	70-130	0			
1,2-Dichloroethane	21.46	0.17	1.0	20	0	107	78-125	0			
1,2-Dichloropropane	23.1	0.25	1.0	20	0	116	75-125	0			
1,3-Dichlorobenzene	19.93	0.29	1.0	20	0	99.6	75-130	0			
1,4-Dichlorobenzene	19.32	0.21	1.0	20	0	96.6	75-130	0			
2-Butanone	26.99	0.58	5.0	20	0	135	55-150	0			
2-Hexanone	24.22	0.13	5.0	20	0	121	60-135	0			
4-Methyl-2-pentanone	29.94	0.11	1.0	20	0	150	77-178	0			
Acetone	27.52	0.92	10	20	0	138	60-160	0			
Benzene	23.24	0.3	1.0	20	0	116	85-125	0			
Bromodichloromethane	22.92	0.23	1.0	20	0	115	75-125	0			
Bromoform	16.84	0.77	1.0	20	0	84.2	60-125	0			
Bromomethane	21.22	0.38	1.0	20	0	106	30-185	0			
Carbon disulfide	32.18	0.23	1.0	20	0	161	60-165	0			
Carbon tetrachloride	22.61	0.31	1.0	20	0	113	65-140	0			
Chlorobenzene	20.59	0.27	1.0	20	0	103	80-120	0			
Chloroethane	21.47	0.29	1.0	20	0	107	50-140	0			
Chloroform	23.16	0.26	1.0	20	0	116	80-130	0			
Chloromethane	17.16	0.17	1.0	20	0	85.8	46-148	0			
cis-1,2-Dichloroethene	23.62	0.25	1.0	20	0	118	75-134	0			
cis-1,3-Dichloropropene	23.45	0.39	1.0	20	0	117	70-130	0			
Dibromochloromethane	17.82	0.38	1.0	20	0	89.1	60-115	0			
Dichlorodifluoromethane	15.77	0.13	1.0	20	0	78.8	20-120	0			
Ethylbenzene	21.57	0.4	1.0	20	0	108	85-125	0			
Isopropylbenzene	21.62	0.31	1.0	20	0	108	80-127	0			
Methyl tert-butyl ether	25.17	0.12	1.0	20	0	126	80-130	0			
Methylene chloride	25.36	0.56	5.0	20	0	127	75-140	0			
Styrene	21.05	0.24	1.0	20	0	105	83-137	0			
Tetrachloroethene	20.05	0.27	1.0	20	0	100	68-166	0			
Toluene	21.69	0.37	1.0	20	0	108	85-125	0			
trans-1,2-Dichloroethene	25.04	0.28	1.0	20	0	125	80-140	0			
trans-1,3-Dichloropropene	19.73	0.82	1.0	20	0	98.6	56-132	0			
Trichloroethene	21.23	0.3	1.0	20	0	106	84-130	0			
Trichlorofluoromethane	18.97	0.2	1.0	20	0	94.8	60-140	0			
Vinyl chloride	17.56	0.2	1.0	20	0	87.8	50-136	0			

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R210092a		Instrument ID VMS6		Method: SW8260B					
Xylenes, Total	65.78	1.3	3.0	60	0	110	80-126	0	
Surr: 1,2-Dichloroethane-d4	19.4	0	0	20	0	97	75-120	0	
Surr: 4-Bromofluorobenzene	20.91	0	0	20	0	105	80-110	0	
Surr: Dibromofluoromethane	20.15	0	0	20	0	101	85-115	0	
Surr: Toluene-d8	19.5	0	0	20	0	97.5	85-110	0	

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

Client: GHD Services Inc.
 Work Order: 1704842
 Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R210092a** Instrument ID **VMS6** Method: **SW8260B**

MS					Sample ID: 1704842-24A MS			Units: µg/L		Analysis Date: 4/19/2017 07:30 AM		
Client ID: WG-017360-041317-MR-046					Run ID: VMS6_170418B			SeqNo: 4384545		Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	21.37	0.36	1.0	20	0	107	75-130	0				
1,1,2,2-Tetrachloroethane	19.66	0.19	1.0	20	0	98.3	75-130	0				
1,1,2-Trichloroethane	19.55	0.4	1.0	20	0	97.8	75-125	0				
1,1-Dichloroethane	24.68	0.31	1.0	20	0	123	75-133	0				
1,1-Dichloroethene	25.86	0.28	1.0	20	0	129	70-145	0				
1,2,4-Trichlorobenzene	17.89	0.21	1.0	20	0	89.4	70-135	0				
1,2-Dibromo-3-chloropropane	16.3	0.97	1.0	20	0	81.5	60-130	0				
1,2-Dibromoethane	19.53	0.98	1.0	20	0	97.6	90-195	0				
1,2-Dichlorobenzene	17.72	0.22	1.0	20	0	88.6	70-130	0				
1,2-Dichloroethane	20.6	0.17	1.0	20	0	103	78-125	0				
1,2-Dichloropropane	22.24	0.25	1.0	20	0	111	75-125	0				
1,3-Dichlorobenzene	17.46	0.29	1.0	20	0	87.3	75-130	0				
1,4-Dichlorobenzene	17.22	0.21	1.0	20	0	86.1	75-130	0				
2-Butanone	26.4	0.58	5.0	20	0	132	55-150	0				
2-Hexanone	23.49	0.13	5.0	20	0	117	60-135	0				
4-Methyl-2-pentanone	27.74	0.11	1.0	20	0	139	77-178	0				
Acetone	31.89	0.92	10	20	4.1	139	60-160	0				
Benzene	22.43	0.3	1.0	20	0	112	85-125	0				
Bromodichloromethane	20.03	0.23	1.0	20	0	100	75-125	0				
Bromoform	13.77	0.77	1.0	20	0	68.8	60-125	0				
Bromomethane	6.01	0.38	1.0	20	0	30	30-185	0				
Carbon disulfide	30.44	0.23	1.0	20	0	152	60-165	0				
Carbon tetrachloride	21.42	0.31	1.0	20	0	107	65-140	0				
Chlorobenzene	18.8	0.27	1.0	20	0	94	80-120	0				
Chloroethane	22.1	0.29	1.0	20	0	110	50-140	0				
Chloroform	22.61	0.26	1.0	20	0	113	80-130	0				
Chloromethane	15.55	0.17	1.0	20	0	77.8	46-148	0				
cis-1,2-Dichloroethene	23.05	0.25	1.0	20	0	115	75-134	0				
cis-1,3-Dichloropropene	19.66	0.39	1.0	20	0	98.3	70-130	0				
Dibromochloromethane	14.99	0.38	1.0	20	0	75	60-115	0				
Dichlorodifluoromethane	16.71	0.13	1.0	20	0	83.6	20-120	0				
Ethylbenzene	19.85	0.4	1.0	20	0	99.2	85-125	0				
Isopropylbenzene	19.7	0.31	1.0	20	0	98.5	80-127	0				
Methyl tert-butyl ether	23.36	0.12	1.0	20	0	117	80-130	0				
Methylene chloride	25.39	0.56	5.0	20	0	127	75-140	0				
Styrene	18.81	0.24	1.0	20	0	94	83-137	0				
Tetrachloroethene	19.94	0.27	1.0	20	1.27	93.4	68-166	0				
Toluene	20.44	0.37	1.0	20	0	102	85-125	0				
trans-1,2-Dichloroethene	25.01	0.28	1.0	20	0	125	80-140	0				
trans-1,3-Dichloropropene	16.16	0.82	1.0	20	0	80.8	56-132	0				
Trichloroethene	20.83	0.3	1.0	20	0.52	102	84-130	0				
Trichlorofluoromethane	20	0.2	1.0	20	0	100	60-140	0				
Vinyl chloride	17.7	0.2	1.0	20	0	88.5	50-136	0				

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R210092a		Instrument ID VMS6		Method: SW8260B					
Xylenes, Total	60.49	1.3	3.0	60	0	101	80-126	0	
Surr: 1,2-Dichloroethane-d4	19.5	0	0	20	0	97.5	75-120	0	
Surr: 4-Bromofluorobenzene	20.71	0	0	20	0	104	80-110	0	
Surr: Dibromofluoromethane	20.09	0	0	20	0	100	85-115	0	
Surr: Toluene-d8	19.47	0	0	20	0	97.4	85-110	0	

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

Client: GHD Services Inc.
 Work Order: 1704842
 Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R210092a** Instrument ID **VMS6** Method: **SW8260B**

MSD					Sample ID: 1704842-24A MSD			Units: µg/L		Analysis Date: 4/19/2017 07:55 AM		
Client ID: WG-017360-041317-MR-046			Run ID: VMS6_170418B			SeqNo: 4384547		Prep Date:		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	21.11	0.36	1.0	20	0	106	75-130	21.37	1.22	30		
1,1,2,2-Tetrachloroethane	19.9	0.19	1.0	20	0	99.5	75-130	19.66	1.21	30		
1,1,2-Trichloroethane	19.44	0.4	1.0	20	0	97.2	75-125	19.55	0.564	30		
1,1-Dichloroethane	24.23	0.31	1.0	20	0	121	75-133	24.68	1.84	30		
1,1-Dichloroethene	25.35	0.28	1.0	20	0	127	70-145	25.86	1.99	30		
1,2,4-Trichlorobenzene	18.19	0.21	1.0	20	0	91	70-135	17.89	1.66	30		
1,2-Dibromo-3-chloropropane	16.12	0.97	1.0	20	0	80.6	60-130	16.3	1.11	30		
1,2-Dibromoethane	19.28	0.98	1.0	20	0	96.4	90-195	19.53	1.29	30		
1,2-Dichlorobenzene	17.64	0.22	1.0	20	0	88.2	70-130	17.72	0.452	30		
1,2-Dichloroethane	19.93	0.17	1.0	20	0	99.6	78-125	20.6	3.31	30		
1,2-Dichloropropane	21.7	0.25	1.0	20	0	108	75-125	22.24	2.46	30		
1,3-Dichlorobenzene	18.6	0.29	1.0	20	0	93	75-130	17.46	6.32	30		
1,4-Dichlorobenzene	18.02	0.21	1.0	20	0	90.1	75-130	17.22	4.54	30		
2-Butanone	26.07	0.58	5.0	20	0	130	55-150	26.4	1.26	30		
2-Hexanone	24.27	0.13	5.0	20	0	121	60-135	23.49	3.27	30		
4-Methyl-2-pentanone	27.75	0.11	1.0	20	0	139	77-178	27.74	0.036	30		
Acetone	30.06	0.92	10	20	4.1	130	60-160	31.89	5.91	30		
Benzene	22.25	0.3	1.0	20	0	111	85-125	22.43	0.806	30		
Bromodichloromethane	20.04	0.23	1.0	20	0	100	75-125	20.03	0.0499	30		
Bromoform	13.87	0.77	1.0	20	0	69.4	60-125	13.77	0.724	30		
Bromomethane	8.89	0.38	1.0	20	0	44.4	30-185	6.01	38.7	30	R	
Carbon disulfide	30.59	0.23	1.0	20	0	153	60-165	30.44	0.492	30		
Carbon tetrachloride	21.16	0.31	1.0	20	0	106	65-140	21.42	1.22	30		
Chlorobenzene	18.63	0.27	1.0	20	0	93.2	80-120	18.8	0.908	30		
Chloroethane	21.5	0.29	1.0	20	0	108	50-140	22.1	2.75	30		
Chloroform	22.15	0.26	1.0	20	0	111	80-130	22.61	2.06	30		
Chloromethane	15.63	0.17	1.0	20	0	78.2	46-148	15.55	0.513	30		
cis-1,2-Dichloroethene	22.86	0.25	1.0	20	0	114	75-134	23.05	0.828	30		
cis-1,3-Dichloropropene	19.67	0.39	1.0	20	0	98.4	70-130	19.66	0.0509	30		
Dibromochloromethane	14.87	0.38	1.0	20	0	74.4	60-115	14.99	0.804	30		
Dichlorodifluoromethane	16.27	0.13	1.0	20	0	81.4	20-120	16.71	2.67	30		
Ethylbenzene	19.9	0.4	1.0	20	0	99.5	85-125	19.85	0.252	30		
Isopropylbenzene	19.81	0.31	1.0	20	0	99	80-127	19.7	0.557	30		
Methyl tert-butyl ether	23.5	0.12	1.0	20	0	118	80-130	23.36	0.598	30		
Methylene chloride	25	0.56	5.0	20	0	125	75-140	25.39	1.55	30		
Styrene	18.8	0.24	1.0	20	0	94	83-137	18.81	0.0532	30		
Tetrachloroethene	19.78	0.27	1.0	20	1.27	92.6	68-166	19.94	0.806	30		
Toluene	20.19	0.37	1.0	20	0	101	85-125	20.44	1.23	30		
trans-1,2-Dichloroethene	24.52	0.28	1.0	20	0	123	80-140	25.01	1.98	30		
trans-1,3-Dichloropropene	16.43	0.82	1.0	20	0	82.2	56-132	16.16	1.66	30		
Trichloroethene	20.38	0.3	1.0	20	0.52	99.3	84-130	20.83	2.18	30		
Trichlorofluoromethane	19.62	0.2	1.0	20	0	98.1	60-140	20	1.92	30		
Vinyl chloride	17.94	0.2	1.0	20	0	89.7	50-136	17.7	1.35	30		

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

Client: GHD Services Inc.
Work Order: 1704842
Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: R210092a		Instrument ID VMS6		Method: SW8260B						
Xylenes, Total	60.28	1.3	3.0	60	0	100	80-126	60.49	0.348	30
Surr: 1,2-Dichloroethane-d4	19.69	0	0	20	0	98.4	75-120	19.5	0.97	30
Surr: 4-Bromofluorobenzene	20.87	0	0	20	0	104	80-110	20.71	0.77	30
Surr: Dibromofluoromethane	20.29	0	0	20	0	101	85-115	20.09	0.991	30
Surr: Toluene-d8	19.44	0	0	20	0	97.2	85-110	19.47	0.154	30

The following samples were analyzed in this batch:

1704842-19A	1704842-20A	1704842-21A
1704842-22A	1704842-23A	1704842-24A
1704842-25A		

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

Client: GHD Services Inc.
 Work Order: 1704842
 Project: Former GRMP (17360)

QC BATCH REPORT

Batch ID: **R210095** Instrument ID **VMS8** Method: **SW8260B**

MBLK		Sample ID: VBLKW1-170419-R210095				Units: µg/L		Analysis Date: 4/19/2017 01:11 PM			
Client ID:		Run ID: VMS8_170419A				SeqNo: 4387223		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	U	0.27	1.0								
Surr: 1,2-Dichloroethane-d4	20.32	0	0	20	0	102	75-120	0			
Surr: 4-Bromofluorobenzene	19.6	0	0	20	0	98	80-110	0			
Surr: Dibromofluoromethane	20.42	0	0	20	0	102	85-115	0			
Surr: Toluene-d8	20.13	0	0	20	0	101	85-110	0			

LCS		Sample ID: VLCSW1-170419-R210095				Units: µg/L		Analysis Date: 4/19/2017 12:14 PM			
Client ID:		Run ID: VMS8_170419A				SeqNo: 4387222		Prep Date:		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	26.62	0.27	1.0	20	0	133	68-166	0			
Surr: 1,2-Dichloroethane-d4	20.71	0	0	20	0	104	75-120	0			
Surr: 4-Bromofluorobenzene	20.1	0	0	20	0	100	80-110	0			
Surr: Dibromofluoromethane	21.44	0	0	20	0	107	85-115	0			
Surr: Toluene-d8	20.1	0	0	20	0	100	85-110	0			

MS		Sample ID: 1704691-08A MS				Units: µg/L		Analysis Date: 4/19/2017 07:28 PM			
Client ID:		Run ID: VMS8_170419A				SeqNo: 4387246		Prep Date:		DF: 100	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	2423	27	100	2000	0	121	68-166	0			
Surr: 1,2-Dichloroethane-d4	2066	0	0	2000	0	103	75-120	0			
Surr: 4-Bromofluorobenzene	2036	0	0	2000	0	102	80-110	0			
Surr: Dibromofluoromethane	2115	0	0	2000	0	106	85-115	0			
Surr: Toluene-d8	2040	0	0	2000	0	102	85-110	0			

MSD		Sample ID: 1704691-08A MSD				Units: µg/L		Analysis Date: 4/19/2017 07:45 PM			
Client ID:		Run ID: VMS8_170419A				SeqNo: 4387249		Prep Date:		DF: 100	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	2597	27	100	2000	0	130	68-166	2423	6.93	30	
Surr: 1,2-Dichloroethane-d4	2111	0	0	2000	0	106	75-120	2066	2.15	30	
Surr: 4-Bromofluorobenzene	2102	0	0	2000	0	105	80-110	2036	3.19	30	
Surr: Dibromofluoromethane	2132	0	0	2000	0	107	85-115	2115	0.801	30	
Surr: Toluene-d8	2049	0	0	2000	0	102	85-110	2040	0.44	30	

The following samples were analyzed in this batch:

1704842-16A 1704842-17A

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



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 3

COC ID: 37138

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information			Project Information				Parameter/Method Request for Analysis												
Purchase Order	017360-TO8Y17-02417		Project Name	GR Metal Plant			A	VOCs											
Work Order	GHD-MR		Project Number	017360			B	Metals, mercury											
Company Name	GHD		Bill To Company				C												
Send Report To	Ruth M. Cible		Invoice Attn				D												
Address	GHD - Plymouth office 14496 Sheldon Rd Ste 200		Address				E												
City/State/Zip	Plymouth, MI 48170		City/State/Zip				F												
Phone			Phone				G												
Fax			Fax				H												
e-Mail Address	Ruth.mickle@GHD.com		e-Mail Address				I												
							J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-017360-041117-MR-023	4/11/17	1027	W	1	3	X										
2	WG- " -024		1103														
3	WG- " -025		1200														
4	WG- " -026		1215														
5	WG- " -027		1321														
6	WG- " -028		1356														
7	WG- " -029		1442														
8	WG- " -030		1536														
9	WG- " -031		1622														
10	WG- " -032		1709		2	4											

Sampler(s) Please Print & Sign Matt Ramsey			Shipment Method Drop off		Turnaround Time in Business Days (BD) ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD				Results Due Date:		
Relinquished by: [Signature]			Date: 4/14/17	Time: 1515	Received by: [Signature]		Notes: SSOW# 017360-036				
Relinquished by: [Signature]			Date: 4/14/17	Time: 1515	Received by (Laboratory): [Signature]		Cooler ID	Cooler Temp	QC Package: (Check One Box Below)		
Logged by (Laboratory): [Signature]			Date: 4/14/17	Time: 1700	Checked by (Laboratory): [Signature]		SR7	2.4°C	☐ Level II Std QC	☐ TRAP Check/ist	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							P45	2.8°C	☐ Level III Std QC/Raw Data	☐ TRAP Level IV	
								3.6°C	☐ Level IV SW846/CLP	☐ Other	



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 2 of 3

COC ID: 37139

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information			Project Information				Parameter/Method Request for Analysis													
Purchase Order	017360-708417-02717		Project Name	Gr Metal Plant			A	VOCs												
Work Order			Project Number	017360			B	metals, mercury												
Company Name	GHD		Bill To Company				C	MS/MSD												
Send Report To	Ruth Mickle		Invoice Attn				D	SVOCs												
Address	GHD-Plymouth Office 14496 Sheldon Rd Ste 200		Address				E													
City/State/Zip	Plymouth, ME 48170		City/State/Zip				F													
Phone			Phone				G													
Fax			Fax				H													
e-Mail Address	Ruth.mickle@GHD.com		e-Mail Address				I													
							J													

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
11	WG-017360-041117-MR-033	4/11/17	1720	W	1/2	4	X	X									
12	WG-017360-041217-MR-034	4/12/17	1038	W	1	3	X										
13	WG- " -035		1109	W		3	X										
14	WG- " -036		1156	W		3	X										
15	WG- " -037		1233	W		3	X										
16	WG- " -038		1420	W		3	X										
17	WG- " -039		1537	W		9	X		X								
18	WG- " -040		1613	W		5	X			X							
19	WG- " -041		1635	W		10	X			X							
20																	

Sampler(s) Please Print & Sign		Shipment Method		Turnaround Time in Business Days (BD)				Results Due Date:	
Matt Ramsey		Drop off		☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD					
Relinquished by:	Date:	Time:	Received by:	Notes:					
Matt Ramsey	4/14/17	1515		SSOW# 017360-036					
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
	4/14/17	1515				☐ Level II Std QC ☐ TRAP Checklist			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			☐ Level III Std QC/Raw Data ☐ TRAP Level IV			
Ken	4/14/17	1700		SR2	24°C	☐ Level IV SW846/CLP			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				PH5	2.8°C	☐ Other			

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



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 3 of 3

COC ID: 37140

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information			Project Information				ALS Project Manager: <u>Chad Whitton</u> ALS Work Order #: <u>1704842</u>												
Parameter/Method Request for Analysis																			
Purchase Order	017360-T8Y17-02Y17		Project Name	CR Metal Plant			A	VOCs											
Work Order			Project Number	017360			B	SVOCs											
Company Name	GHD		Bill To Company				C	MS/MSD											
Send Report To	Ruth Mickle		Invoice Attn				D												
Address	GHD - Plymouth office 14496 Sheldon Rd ste 200		Address				E												
City/State/Zip	Plymouth, MI 48170		City/State/Zip				F												
Phone			Phone				G												
Fax			Fax				H												
e-Mail Address	Ruth.Mickle@ghd.com		e-Mail Address				I												
J																			

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-017360-641317-MR-042	4/13/17	1118	W	2	5	X	X									
2	WL- 4 -043		1156			5											
3	WL- 11 -044		1225			5											
4	WG- 11 -045		1345			5											
5	WG- 11 -046		1426			13			X								
6	WG- 11 -047		1501			5											
7	TRIP BLANK-2					1											
8																	
9																	
10																	

Sampler(s) Please Print & Sign <u>Matt Ramsey</u>			Shipment Method <u>Drop off</u>		Turnaround Time in Business Days (BD) ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD				Results Due Date:					
Relinquished by: <u>Matt Ramsey</u>			Date: 4/14/17		Time: 1515		Received by:				Notes: <u>SSOW # 017360-036</u>			
Relinquished by:			Date: 4/14/17		Time: 1515		Received by (Laboratory):				Cooler ID			
Logged by (Laboratory): <u>Kew</u>			Date: 4/14/17		Time: 1700		Checked by (Laboratory): <u>AS</u>				Cooler Temp			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035											QC Package: (Check One Box Below)			
											☐ Level II Std QC		☐ TRRP Checklist	
											☐ Level III Std QC/Raw Data		☐ TRRP Level IV	
											☐ Level IV SW846/CLP			
											☐ Other			

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

Sample Receipt Checklist

Client Name: **GHD - PLYMOUTH**

Date/Time Received: **14-Apr-17 15:15**

Work Order: **1704842**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

14-Apr-17
Date

Reviewed by: Alex Coaszar
eSignature

14-Apr-17
Date

Matrices: **Water**

Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.4/2.4, 2.8/2.8, 3.6/3.6 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>4/14/2017 5:25:03 PM</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

Attachment B

Data Validation Memorandum



Memorandum

May 10, 2017

To: Jennifer Quigley

Ref. No.: 017360

From: Ruth Mickle/ma/80/Det

Tel: 734-453-5123

**Subject: Analytical Results and Reduced Validation
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Semi-Annual Groundwater Monitoring Program at the Former Grand Rapids Metal Plant Site during April 2017. Samples were submitted to ALS Environmental, located in Holland, Michigan. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) "Former Grand Rapids Metal Plant Work Plan Quality Assurance Project Plan (QAPP)", Revision 1, January 6, 2011
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999
- iii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, February 1994

Items ii) and iii) will subsequently be referred to as the "Guidelines" in this Memorandum.



2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (4 +/- 2°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation. Low concentrations of target metal parameters were detected in the method blank, which indicate a potential for laboratory contamination. The associated samples that contained similar concentrations of these compounds are evidence of laboratory contamination and the results were qualified non-detect, as detailed in Table 4.

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) and semi-volatile organic compound (SVOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.



5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits or outlying percent recoveries did not result in qualification, demonstrating acceptable analytical accuracy.

Inorganic Analyses

The LCS contained all compounds of interest. The LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. Table 5 presents the rejected sample result due to outlying MS/MSD results. All remaining percent recoveries and RPD values were within the laboratory control limits criteria, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision.



7. Field QA/QC Samples

The field QA/QC consisted of two trip blank samples and five field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, two trip blanks were submitted to the laboratory for VOC analysis. The trip blank results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, five field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific exception and qualifications noted herein.

Table 1

**Sample Collection and Analysis Summary
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

					Analysis/Parameters			
Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	TCL VOC	TCL SVOC	Site-Specific Metals	Comments
ALS-MI SDG No.: 1704435								
SW-017360-040517-MR-001	C-1	Water	04/05/2017	10:30	X	--	--	
SW-017360-040517-MR-002	C-2	Water	04/05/2017	10:35	X	--	--	
SW-017360-040517-MR-003	C-3	Water	04/05/2017	10:40	X	--	--	
WG-017360-040517-MR-004	MW6-03	Water	04/05/2017	11:30	X	--	--	
WG-017360-040517-MR-005	87-13	Water	04/05/2017	11:50	X	--	--	
WG-017360-040517-MR-006	MW59-14	Water	04/05/2017	13:15	X	--	X	
WG-017360-040517-MR-007	MW59-14	Water	04/05/2017	13:30	X	--	X	FD (MW59-14)
WG-017360-040517-MR-008	87-10	Water	04/05/2017	14:15	X	--	--	
WG-017360-040617-MR-009	MW9-04	Water	04/06/2017	11:11	X	--	--	
WG-017360-040617-MR-010	MW8-04	Water	04/06/2017	10:36	X	--	--	
WG-017360-040617-MR-011	MW4-03	Water	04/06/2017	11:58	X	--	--	
WG-017360-040617-MR-012	MW10-04	Water	04/06/2017	12:51	X	--	--	
WG-017360-040617-MR-013	MW11S-05	Water	04/06/2017	14:20	X	--	--	MS/MSD
WG-017360-040617-MR-014	MW11D-04	Water	04/06/2017	14:37	X	--	--	
WG-017360-040617-MR-015	87-8	Water	04/06/2017	16:43	X	--	--	
WG-017360-040717-MR-016	MW48-13	Water	04/07/2017	10:41	X	--	--	
WG-017360-040717-MR-017	MW17-06	Water	04/07/2017	11:27	X	--	--	MS/MSD
WG-017360-040717-MR-018	MW7-03	Water	04/07/2017	12:56	X	--	--	FD (MW7-03)
WG-017360-040717-MR-019	MW7-03	Water	04/07/2017	13:15	X	--	--	
WG-017360-040717-MR-020	86-3	Water	04/07/2017	13:20	X	--	--	
WG-017360-040717-MR-021	MW28-12	Water	04/07/2017	15:20	X	--	--	
WG-017360-040717-MR-022	MW58-13	Water	04/07/2017	16:00	X	--	--	
Trip Blank-1	Trip Blank	Water	04/07/2017	--	X	--	--	Trip Blank

Table 1

**Sample Collection and Analysis Summary
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

					Analysis/Parameters			
Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	TCL VOC	TCL SVOC	Site-Specific Metals	Comments
ALS-MI SDG No.: 1704842								
WG-017360-041117-MR-023	MW30-12	Water	04/11/2017	10:27	X	--	--	FD (MW33-12)
WG-017360-041117-MR-024	MW32-12	Water	04/11/2017	11:03	X	--	--	
WG-017360-041117-MR-025	MW33-12	Water	04/11/2017	12:00	X	--	--	
WG-017360-041117-MR-026	MW33-12	Water	04/11/2017	12:15	X	--	--	
WG-017360-041117-MR-027	MW35-12	Water	04/11/2017	13:21	X	--	--	
WG-017360-041117-MR-028	MW34-12	Water	04/11/2017	13:56	X	--	--	
WG-017360-041117-MR-029	MW40-12	Water	04/11/2017	14:42	X	--	--	
WG-017360-041117-MR-030	MW41-12	Water	04/11/2017	15:36	X	--	--	FD (MW60-14)
WG-017360-041117-MR-031	MW15-04	Water	04/11/2017	16:22	X	--	--	
WG-017360-041117-MR-032	MW60-14	Water	04/11/2017	17:09	X	--	X	
WG-017360-041117-MR-033	MW60-14	Water	04/11/2017	17:20	X	--	X	
WG-017360-041217-MR-034	MW42-12	Water	04/12/2017	10:38	X	--	--	
WG-017360-041217-MR-035	MW37-12	Water	04/12/2017	11:09	X	--	--	
WG-017360-041217-MR-036	MW38-12	Water	04/12/2017	11:56	X	--	--	
WG-017360-041217-MR-037	MW43-12	Water	04/12/2017	12:33	X	--	--	MS/MSD
WG-017360-041217-MR-038	MW49-13	Water	04/12/2017	14:20	X	--	--	
WG-017360-041217-MR-039	MW2-03	Water	04/12/2017	15:37	X	--	--	
WG-017360-041217-MR-040	85-6	Water	04/12/2017	16:13	X	X	--	
WG-017360-041217-MR-041	85-6	Water	04/12/2017	16:35	X	X	--	
WG-017360-041317-MR-042	MW52-12	Water	04/13/2017	11:18	X	X	--	
WG-017360-041317-MR-043	MW51-12	Water	04/13/2017	11:56	X	X	--	FD (85-6)
WG-017360-041317-MR-044	MW50-12	Water	04/13/2017	12:25	X	X	--	
WG-017360-041317-MR-045	MW44-12	Water	04/13/2017	13:45	X	X	--	

Table 1

**Sample Collection and Analysis Summary
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>			Comments
					TCL VOC	TCL SVOC	Site-Specific Metals	
WG-017360-041317-MR-046	MW45-12	Water	04/13/2017	14:26	X	X	--	MS/MSD
WG-017360-041317-MR-047	MW46-12	Water	04/13/2017	15:01	X	X	--	
Trip Blank-2	Trip Blank	Water	04/13/2017	--	X	--	--	Trip Blank

Notes:

- FD - Field Duplicate sample of sample in parenthesis
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- TCL - Target Compound List
- VOC - Volatile Organic Compounds
- SVOC - Semivolatile Organic Compounds
- ALS- MI - ALS Environmental - Holland, Michigan
- SDG - Sample Delivery Group

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		85-6	85-6	86-3
Sample Name:		WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-040717-MR-020
Sample Date:		04/12/2017	04/12/2017 Duplicate	04/07/2017
Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	50 U	6.0 J
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	0.42 J	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		85-6	85-6	86-3
Sample Name:		WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-040717-MR-020
Sample Date:		04/12/2017	04/12/2017 Duplicate	04/07/2017
Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5.5	4.6	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0	1.8
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5.7 U	5.0 U	--
2,4,5-Trichlorophenol	µg/L	5.7 U	5.0 U	--
2,4,6-Trichlorophenol	µg/L	5.7 U	5.0 U	--
2,4-Dichlorophenol	µg/L	5.7 U	5.0 U	--
2,4-Dimethylphenol	µg/L	5.7 U	5.0 U	--
2,4-Dinitrophenol	µg/L	5.7 U	5.0 U	--
2,4-Dinitrotoluene	µg/L	5.7 U	5.0 U	--
2,6-Dinitrotoluene	µg/L	5.7 U	5.0 U	--
2-Chloronaphthalene	µg/L	5.7 U	5.0 U	--
2-Chlorophenol	µg/L	5.7 U	5.0 U	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		85-6	85-6	86-3
Sample Name:		WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-040717-MR-020
Sample Date:		04/12/2017	04/12/2017	04/07/2017
		Duplicate		
Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	5.7 U	5.0 U	--
2-Methylphenol	µg/L	5.7 U	5.0 U	--
2-Nitroaniline	µg/L	5.7 U	5.0 U	--
2-Nitrophenol	µg/L	5.7 U	5.0 U	--
3&4-Methylphenol	µg/L	5.7 U	5.0 U	--
3,3'-Dichlorobenzidine	µg/L	5.7 U	5.0 U	--
3-Nitroaniline	µg/L	5.7 U	5.0 U	--
4,6-Dinitro-2-methylphenol	µg/L	5.7 U	5.0 U	--
4-Bromophenyl phenyl ether	µg/L	5.7 U	5.0 U	--
4-Chloro-3-methylphenol	µg/L	5.7 U	5.0 U	--
4-Chloroaniline	µg/L	5.7 U	5.0 U	--
4-Chlorophenyl phenyl ether	µg/L	5.7 U	5.0 U	--
4-Nitroaniline	µg/L	5.7 U	5.0 U	--
4-Nitrophenol	µg/L	5.7 U	5.0 U	--
Acenaphthene	µg/L	5.7 U	5.0 U	--
Acenaphthylene	µg/L	5.7 U	5.0 U	--
Acetophenone	µg/L	1.1 U	1.0 U	--
Anthracene	µg/L	5.7 U	5.0 U	--
Atrazine	µg/L	1.1 U	1.0 U	--
Benzaldehyde	µg/L	1.1 U	1.0 U	--
Benzo(a)anthracene	µg/L	5.7 U	5.0 U	--
Benzo(a)pyrene	µg/L	5.7 U	5.0 U	--
Benzo(b)fluoranthene	µg/L	5.7 U	5.0 U	--
Benzo(g,h,i)perylene	µg/L	5.7 U	5.0 U	--
Benzo(k)fluoranthene	µg/L	5.7 U	5.0 U	--
Biphenyl (1,1-Biphenyl)	µg/L	5.7 U	5.0 U	--
bis(2-Chloroethoxy)methane	µg/L	5.7 U	5.0 U	--
bis(2-Chloroethyl)ether	µg/L	5.7 U	5.0 U	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5.7 U	5.0 U	--
Butyl benzylphthalate (BBP)	µg/L	5.7 U	5.0 U	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Parameters	Unit	Location ID:	85-6	85-6	86-3
		Sample Name:	WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-040717-MR-020
		Sample Date:	04/12/2017	04/12/2017 Duplicate	04/07/2017
Semivolatile Organic Compounds					
Caprolactam	µg/L		11 U	10 U	--
Carbazole	µg/L		5.7 U	5.0 U	--
Chrysene	µg/L		5.7 U	5.0 U	--
Di-n-butylphthalate (DBP)	µg/L		5.7 U	5.0 U	--
Di-n-octyl phthalate (DnOP)	µg/L		5.7 U	5.0 U	--
Dibenz(a,h)anthracene	µg/L		5.7 U	5.0 U	--
Dibenzofuran	µg/L		5.7 U	5.0 U	--
Diethyl phthalate	µg/L		5.7 U	5.0 U	--
Dimethyl phthalate	µg/L		5.7 U	5.0 U	--
Fluoranthene	µg/L		5.7 U	5.0 U	--
Fluorene	µg/L		5.7 U	5.0 U	--
Hexachlorobenzene	µg/L		5.7 U	5.0 U	--
Hexachlorobutadiene	µg/L		5.7 U	5.0 U	--
Hexachlorocyclopentadiene	µg/L		5.7 U	5.0 U	--
Hexachloroethane	µg/L		5.7 U	5.0 U	--
Indeno(1,2,3-cd)pyrene	µg/L		5.7 U	5.0 U	--
Isophorone	µg/L		5.7 U	5.0 U	--
N-Nitrosodi-n-propylamine	µg/L		5.7 U	5.0 U	--
N-Nitrosodiphenylamine	µg/L		5.7 U	5.0 U	--
Naphthalene	µg/L		5.7 U	5.0 U	--
Nitrobenzene	µg/L		5.7 U	5.0 U	--
Pentachlorophenol	µg/L		5.7 U	5.0 U	--
Phenanthrene	µg/L		5.7 U	5.0 U	--
Phenol	µg/L		5.7 U	5.0 U	--
Pyrene	µg/L		5.7 U	5.0 U	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	85-6	85-6	86-3
Sample Name:	WG-017360-041217-MR-040	WG-017360-041217-MR-041	WG-017360-040717-MR-020
Sample Date:	04/12/2017	04/12/2017 Duplicate	04/07/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	87-8	87-10	87-13
Sample Name:	WG-017360-040617-MR-015	WG-017360-040517-MR-008	WG-017360-040517-MR-005
Sample Date:	04/06/2017	04/05/2017	04/05/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	3.4 J	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	8.1	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	33	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	87-8	87-10	87-13
Sample Name:	WG-017360-040617-MR-015	WG-017360-040517-MR-008	WG-017360-040517-MR-005
Sample Date:	04/06/2017	04/05/2017	04/05/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	87-8	87-10	87-13
Sample Name:	WG-017360-040617-MR-015	WG-017360-040517-MR-008	WG-017360-040517-MR-005
Sample Date:	04/06/2017	04/05/2017	04/05/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	87-8	87-10	87-13
Sample Name:	WG-017360-040617-MR-015	WG-017360-040517-MR-008	WG-017360-040517-MR-005
Sample Date:	04/06/2017	04/05/2017	04/05/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	87-8	87-10	87-13
Sample Name:	WG-017360-040617-MR-015	WG-017360-040517-MR-008	WG-017360-040517-MR-005
Sample Date:	04/06/2017	04/05/2017	04/05/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	C-1	C-2	C-3
Sample Name:	SW-017360-040517-MR-001	SW-017360-040517-MR-002	SW-017360-040517-MR-003
Sample Date:	04/05/2017	04/05/2017	04/05/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	3.3 J	3.3 J	3.6 J
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	11 J	14 J	23 J
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	C-1	C-2	C-3
Sample Name:	SW-017360-040517-MR-001	SW-017360-040517-MR-002	SW-017360-040517-MR-003
Sample Date:	04/05/2017	04/05/2017	04/05/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	C-1	C-2	C-3
Sample Name:	SW-017360-040517-MR-001	SW-017360-040517-MR-002	SW-017360-040517-MR-003
Sample Date:	04/05/2017	04/05/2017	04/05/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	C-1	C-2	C-3
Sample Name:	SW-017360-040517-MR-001	SW-017360-040517-MR-002	SW-017360-040517-MR-003
Sample Date:	04/05/2017	04/05/2017	04/05/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	C-1	C-2	C-3
Sample Name:	SW-017360-040517-MR-001	SW-017360-040517-MR-002	SW-017360-040517-MR-003
Sample Date:	04/05/2017	04/05/2017	04/05/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW2-03	MW4-03	MW6-03
Sample Name:	WG-017360-041217-MR-039	WG-017360-040617-MR-011	WG-017360-040517-MR-004
Sample Date:	04/12/2017	04/06/2017	04/05/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	50 U	3.2 J
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW2-03	MW4-03	MW6-03
Sample Name:	WG-017360-041217-MR-039	WG-017360-040617-MR-011	WG-017360-040517-MR-004
Sample Date:	04/12/2017	04/06/2017	04/05/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	4.0	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW2-03	MW4-03	MW6-03
Sample Name:	WG-017360-041217-MR-039	WG-017360-040617-MR-011	WG-017360-040517-MR-004
Sample Date:	04/12/2017	04/06/2017	04/05/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW2-03	MW4-03	MW6-03
Sample Name:	WG-017360-041217-MR-039	WG-017360-040617-MR-011	WG-017360-040517-MR-004
Sample Date:	04/12/2017	04/06/2017	04/05/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW2-03	MW4-03	MW6-03
Sample Name:	WG-017360-041217-MR-039	WG-017360-040617-MR-011	WG-017360-040517-MR-004
Sample Date:	04/12/2017	04/06/2017	04/05/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		MW7-03	MW7-03	MW8-04
Sample Name:		WG-017360-040717-MR-019	WG-017360-040717-MR-018	WG-017360-040617-MR-010
Sample Date:		04/07/2017	04/07/2017	04/06/2017
		Duplicate		
Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	4.2
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	0.91 J	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		MW7-03	MW7-03	MW8-04
Sample Name:		WG-017360-040717-MR-019	WG-017360-040717-MR-018	WG-017360-040617-MR-010
Sample Date:		04/07/2017	04/07/2017 Duplicate	04/06/2017
Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.2	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW7-03	MW7-03	MW8-04
Sample Name:	WG-017360-040717-MR-019	WG-017360-040717-MR-018	WG-017360-040617-MR-010
Sample Date:	04/07/2017	04/07/2017	04/06/2017
		Duplicate	

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW7-03	MW7-03	MW8-04
Sample Name:	WG-017360-040717-MR-019	WG-017360-040717-MR-018	WG-017360-040617-MR-010
Sample Date:	04/07/2017	04/07/2017	04/06/2017
		Duplicate	

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW7-03	MW7-03	MW8-04
Sample Name:	WG-017360-040717-MR-019	WG-017360-040717-MR-018	WG-017360-040617-MR-010
Sample Date:	04/07/2017	04/07/2017	04/06/2017
		Duplicate	

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW9-04	MW10-04	MW11D-04
Sample Name:	WG-017360-040617-MR-009	WG-017360-040617-MR-012	WG-017360-040617-MR-014
Sample Date:	04/06/2017	04/06/2017	04/06/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	3.6	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.1	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW9-04	MW10-04	MW11D-04
Sample Name:	WG-017360-040617-MR-009	WG-017360-040617-MR-012	WG-017360-040617-MR-014
Sample Date:	04/06/2017	04/06/2017	04/06/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	3.4	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW9-04	MW10-04	MW11D-04
Sample Name:	WG-017360-040617-MR-009	WG-017360-040617-MR-012	WG-017360-040617-MR-014
Sample Date:	04/06/2017	04/06/2017	04/06/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW9-04	MW10-04	MW11D-04
Sample Name:	WG-017360-040617-MR-009	WG-017360-040617-MR-012	WG-017360-040617-MR-014
Sample Date:	04/06/2017	04/06/2017	04/06/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW9-04	MW10-04	MW11D-04
Sample Name:	WG-017360-040617-MR-009	WG-017360-040617-MR-012	WG-017360-040617-MR-014
Sample Date:	04/06/2017	04/06/2017	04/06/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		MW11S-05	MW15-04	MW17-06
Sample Name:		WG-017360-040617-MR-013	WG-017360-041117-MR-031	WG-017360-040717-MR-017
Sample Date:		04/06/2017	04/11/2017	04/07/2017
Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.1	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	67
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW11S-05	MW15-04	MW17-06
Sample Name:	WG-017360-040617-MR-013	WG-017360-041117-MR-031	WG-017360-040717-MR-017
Sample Date:	04/06/2017	04/11/2017	04/07/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	92
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.8
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	5.7
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW11S-05	MW15-04	MW17-06
Sample Name:	WG-017360-040617-MR-013	WG-017360-041117-MR-031	WG-017360-040717-MR-017
Sample Date:	04/06/2017	04/11/2017	04/07/2017

Parameters**Unit****Semivolatile Organic Compounds**

Parameters	Unit	MW11S-05	MW15-04	MW17-06
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzyolphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW11S-05	MW15-04	MW17-06
Sample Name:	WG-017360-040617-MR-013	WG-017360-041117-MR-031	WG-017360-040717-MR-017
Sample Date:	04/06/2017	04/11/2017	04/07/2017

Parameters**Unit****Semivolatile Organic Compounds**

Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW11S-05	MW15-04	MW17-06
Sample Name:	WG-017360-040617-MR-013	WG-017360-041117-MR-031	WG-017360-040717-MR-017
Sample Date:	04/06/2017	04/11/2017	04/07/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW28-12	MW30-12	MW32-12
Sample Name:	WG-017360-040717-MR-021	WG-017360-041117-MR-023	WG-017360-041117-MR-024
Sample Date:	04/07/2017	04/11/2017	04/11/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	2.4 J	1.5 J
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.2	9.9	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW28-12	MW30-12	MW32-12
Sample Name:	WG-017360-040717-MR-021	WG-017360-041117-MR-023	WG-017360-041117-MR-024
Sample Date:	04/07/2017	04/11/2017	04/11/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	3.6
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW28-12	MW30-12	MW32-12
Sample Name:	WG-017360-040717-MR-021	WG-017360-041117-MR-023	WG-017360-041117-MR-024
Sample Date:	04/07/2017	04/11/2017	04/11/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW28-12	MW30-12	MW32-12
Sample Name:	WG-017360-040717-MR-021	WG-017360-041117-MR-023	WG-017360-041117-MR-024
Sample Date:	04/07/2017	04/11/2017	04/11/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW28-12	MW30-12	MW32-12
Sample Name:	WG-017360-040717-MR-021	WG-017360-041117-MR-023	WG-017360-041117-MR-024
Sample Date:	04/07/2017	04/11/2017	04/11/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		MW33-12	MW33-12	MW34-12
Sample Name:		WG-017360-041117-MR-025	WG-017360-041117-MR-026	WG-017360-041117-MR-028
Sample Date:		04/11/2017	04/11/2017	04/11/2017
			Duplicate	
Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	2.6 J	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	3.5	3.5	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:		MW33-12	MW33-12	MW34-12
Sample Name:		WG-017360-041117-MR-025	WG-017360-041117-MR-026	WG-017360-041117-MR-028
Sample Date:		04/11/2017	04/11/2017 Duplicate	04/11/2017
Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.8	1.6	2.3
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW33-12	MW33-12	MW34-12
Sample Name:	WG-017360-041117-MR-025	WG-017360-041117-MR-026	WG-017360-041117-MR-028
Sample Date:	04/11/2017	04/11/2017	04/11/2017
		Duplicate	

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW33-12	MW33-12	MW34-12
Sample Name:	WG-017360-041117-MR-025	WG-017360-041117-MR-026	WG-017360-041117-MR-028
Sample Date:	04/11/2017	04/11/2017	04/11/2017
		Duplicate	

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW33-12	MW33-12	MW34-12
Sample Name:	WG-017360-041117-MR-025	WG-017360-041117-MR-026	WG-017360-041117-MR-028
Sample Date:	04/11/2017	04/11/2017	04/11/2017
		Duplicate	

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW35-12	MW37-12	MW38-12
Sample Name:	WG-017360-041117-MR-027	WG-017360-041217-MR-035	WG-017360-041217-MR-036
Sample Date:	04/11/2017	04/12/2017	04/12/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	2.4 J	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.97 J
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW35-12	MW37-12	MW38-12
Sample Name:	WG-017360-041117-MR-027	WG-017360-041217-MR-035	WG-017360-041217-MR-036
Sample Date:	04/11/2017	04/12/2017	04/12/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	25	12	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	3.2
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW35-12	MW37-12	MW38-12
Sample Name:	WG-017360-041117-MR-027	WG-017360-041217-MR-035	WG-017360-041217-MR-036
Sample Date:	04/11/2017	04/12/2017	04/12/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW35-12	MW37-12	MW38-12
Sample Name:	WG-017360-041117-MR-027	WG-017360-041217-MR-035	WG-017360-041217-MR-036
Sample Date:	04/11/2017	04/12/2017	04/12/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW35-12	MW37-12	MW38-12
Sample Name:	WG-017360-041117-MR-027	WG-017360-041217-MR-035	WG-017360-041217-MR-036
Sample Date:	04/11/2017	04/12/2017	04/12/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW40-12	MW41-12	MW42-12
Sample Name:	WG-017360-041117-MR-029	WG-017360-041117-MR-030	WG-017360-041217-MR-034
Sample Date:	04/11/2017	04/11/2017	04/12/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	2.2	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW40-12	MW41-12	MW42-12
Sample Name:	WG-017360-041117-MR-029	WG-017360-041117-MR-030	WG-017360-041217-MR-034
Sample Date:	04/11/2017	04/11/2017	04/12/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	4.1	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--
2-Chloronaphthalene	µg/L	--	--	--
2-Chlorophenol	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW40-12	MW41-12	MW42-12
Sample Name:	WG-017360-041117-MR-029	WG-017360-041117-MR-030	WG-017360-041217-MR-034
Sample Date:	04/11/2017	04/11/2017	04/12/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW40-12	MW41-12	MW42-12
Sample Name:	WG-017360-041117-MR-029	WG-017360-041117-MR-030	WG-017360-041217-MR-034
Sample Date:	04/11/2017	04/11/2017	04/12/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW40-12	MW41-12	MW42-12
Sample Name:	WG-017360-041117-MR-029	WG-017360-041117-MR-030	WG-017360-041217-MR-034
Sample Date:	04/11/2017	04/11/2017	04/12/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW43-12	MW44-12	MW45-12
Sample Name:	WG-017360-041217-MR-037	WG-017360-041317-MR-045	WG-017360-041317-MR-046
Sample Date:	04/12/2017	04/13/2017	04/13/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	2.8 J	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	0.69 J	50 U
Acetone	µg/L	50 U	8.5 J	4.1 J
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	0.86 J	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW43-12	MW44-12	MW45-12
Sample Name:	WG-017360-041217-MR-037	WG-017360-041317-MR-045	WG-017360-041317-MR-046
Sample Date:	04/12/2017	04/13/2017	04/13/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	0.67 J	1.0 U
Isopropyl benzene	µg/L	5.0 U	1.6 J	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	2.6	1.0 U	1.3
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.52 J
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	2.4 J	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	5.5 U	5.4 U
2,4,5-Trichlorophenol	µg/L	--	5.5 U	5.4 U
2,4,6-Trichlorophenol	µg/L	--	5.5 U	5.4 U
2,4-Dichlorophenol	µg/L	--	5.5 U	5.4 U
2,4-Dimethylphenol	µg/L	--	2.8 J	5.4 U
2,4-Dinitrophenol	µg/L	--	5.5 U	5.4 U
2,4-Dinitrotoluene	µg/L	--	5.5 U	5.4 U
2,6-Dinitrotoluene	µg/L	--	5.5 U	5.4 U
2-Chloronaphthalene	µg/L	--	5.5 U	5.4 U
2-Chlorophenol	µg/L	--	5.5 U	5.4 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW43-12	MW44-12	MW45-12
Sample Name:	WG-017360-041217-MR-037	WG-017360-041317-MR-045	WG-017360-041317-MR-046
Sample Date:	04/12/2017	04/13/2017	04/13/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	5.5 U	5.4 U
2-Methylphenol	µg/L	--	0.88 J	5.4 U
2-Nitroaniline	µg/L	--	5.5 U	5.4 U
2-Nitrophenol	µg/L	--	5.5 U	5.4 U
3&4-Methylphenol	µg/L	--	0.97 J	5.4 U
3,3'-Dichlorobenzidine	µg/L	--	5.5 U	R
3-Nitroaniline	µg/L	--	5.5 U	5.4 U
4,6-Dinitro-2-methylphenol	µg/L	--	5.5 U	5.4 U
4-Bromophenyl phenyl ether	µg/L	--	5.5 U	5.4 U
4-Chloro-3-methylphenol	µg/L	--	5.5 U	5.4 U
4-Chloroaniline	µg/L	--	5.5 U	5.4 U
4-Chlorophenyl phenyl ether	µg/L	--	5.5 U	5.4 U
4-Nitroaniline	µg/L	--	5.5 U	5.4 U
4-Nitrophenol	µg/L	--	5.5 U	5.4 U
Acenaphthene	µg/L	--	5.5 U	5.4 U
Acenaphthylene	µg/L	--	5.5 U	5.4 U
Acetophenone	µg/L	--	1.1 U	1.1 U
Anthracene	µg/L	--	5.5 U	5.4 U
Atrazine	µg/L	--	1.1 U	1.1 U
Benzaldehyde	µg/L	--	1.1 U	1.1 U
Benzo(a)anthracene	µg/L	--	5.5 U	5.4 U
Benzo(a)pyrene	µg/L	--	5.5 U	5.4 U
Benzo(b)fluoranthene	µg/L	--	5.5 U	5.4 U
Benzo(g,h,i)perylene	µg/L	--	5.5 U	5.4 U
Benzo(k)fluoranthene	µg/L	--	5.5 U	5.4 U
Biphenyl (1,1-Biphenyl)	µg/L	--	5.5 U	5.4 U
bis(2-Chloroethoxy)methane	µg/L	--	5.5 U	5.4 U
bis(2-Chloroethyl)ether	µg/L	--	5.5 U	5.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	5.5 U	5.4 U
Butyl benzylphthalate (BBP)	µg/L	--	5.5 U	5.4 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW43-12	MW44-12	MW45-12
Sample Name:	WG-017360-041217-MR-037	WG-017360-041317-MR-045	WG-017360-041317-MR-046
Sample Date:	04/12/2017	04/13/2017	04/13/2017

Parameters**Unit****Semivolatile Organic Compounds**

Caprolactam	µg/L	--	11 U	11 U
Carbazole	µg/L	--	5.5 U	5.4 U
Chrysene	µg/L	--	5.5 U	5.4 U
Di-n-butylphthalate (DBP)	µg/L	--	5.5 U	5.4 U
Di-n-octyl phthalate (DnOP)	µg/L	--	5.5 U	5.4 U
Dibenz(a,h)anthracene	µg/L	--	5.5 U	5.4 U
Dibenzofuran	µg/L	--	5.5 U	5.4 U
Diethyl phthalate	µg/L	--	5.5 U	5.4 U
Dimethyl phthalate	µg/L	--	5.5 U	5.4 U
Fluoranthene	µg/L	--	5.5 U	5.4 U
Fluorene	µg/L	--	5.5 U	5.4 U
Hexachlorobenzene	µg/L	--	5.5 U	5.4 U
Hexachlorobutadiene	µg/L	--	5.5 U	5.4 U
Hexachlorocyclopentadiene	µg/L	--	5.5 U	5.4 U
Hexachloroethane	µg/L	--	5.5 U	5.4 U
Indeno(1,2,3-cd)pyrene	µg/L	--	5.5 U	5.4 U
Isophorone	µg/L	--	5.5 U	5.4 U
N-Nitrosodi-n-propylamine	µg/L	--	5.5 U	5.4 U
N-Nitrosodiphenylamine	µg/L	--	5.5 U	5.4 U
Naphthalene	µg/L	--	0.65 J	5.4 U
Nitrobenzene	µg/L	--	5.5 U	5.4 U
Pentachlorophenol	µg/L	--	5.5 U	5.4 U
Phenanthrene	µg/L	--	5.5 U	5.4 U
Phenol	µg/L	--	5.5 U	5.4 U
Pyrene	µg/L	--	5.5 U	5.4 U

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW43-12	MW44-12	MW45-12
Sample Name:	WG-017360-041217-MR-037	WG-017360-041317-MR-045	WG-017360-041317-MR-046
Sample Date:	04/12/2017	04/13/2017	04/13/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW46-12	MW48-13	MW49-13
Sample Name:	WG-017360-041317-MR-047	WG-017360-040717-MR-016	WG-017360-041217-MR-038
Sample Date:	04/13/2017	04/07/2017	04/12/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	5.6 J	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	0.93 J	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW46-12	MW48-13	MW49-13
Sample Name:	WG-017360-041317-MR-047	WG-017360-040717-MR-016	WG-017360-041217-MR-038
Sample Date:	04/13/2017	04/07/2017	04/12/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	0.57 J	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	190
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	3.0
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5.0 U	--	--
2,4,5-Trichlorophenol	µg/L	5.0 U	--	--
2,4,6-Trichlorophenol	µg/L	5.0 U	--	--
2,4-Dichlorophenol	µg/L	5.0 U	--	--
2,4-Dimethylphenol	µg/L	5.0 U	--	--
2,4-Dinitrophenol	µg/L	5.0 U	--	--
2,4-Dinitrotoluene	µg/L	5.0 U	--	--
2,6-Dinitrotoluene	µg/L	5.0 U	--	--
2-Chloronaphthalene	µg/L	5.0 U	--	--
2-Chlorophenol	µg/L	5.0 U	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW46-12	MW48-13	MW49-13
Sample Name:	WG-017360-041317-MR-047	WG-017360-040717-MR-016	WG-017360-041217-MR-038
Sample Date:	04/13/2017	04/07/2017	04/12/2017

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	5.0 U	--	--
2-Methylphenol	µg/L	5.0 U	--	--
2-Nitroaniline	µg/L	5.0 U	--	--
2-Nitrophenol	µg/L	5.0 U	--	--
3&4-Methylphenol	µg/L	5.0 U	--	--
3,3'-Dichlorobenzidine	µg/L	5.0 U	--	--
3-Nitroaniline	µg/L	5.0 U	--	--
4,6-Dinitro-2-methylphenol	µg/L	5.0 U	--	--
4-Bromophenyl phenyl ether	µg/L	5.0 U	--	--
4-Chloro-3-methylphenol	µg/L	5.0 U	--	--
4-Chloroaniline	µg/L	5.0 U	--	--
4-Chlorophenyl phenyl ether	µg/L	5.0 U	--	--
4-Nitroaniline	µg/L	5.0 U	--	--
4-Nitrophenol	µg/L	5.0 U	--	--
Acenaphthene	µg/L	5.0 U	--	--
Acenaphthylene	µg/L	5.0 U	--	--
Acetophenone	µg/L	1.0 U	--	--
Anthracene	µg/L	5.0 U	--	--
Atrazine	µg/L	1.0 U	--	--
Benzaldehyde	µg/L	1.0 U	--	--
Benzo(a)anthracene	µg/L	5.0 U	--	--
Benzo(a)pyrene	µg/L	5.0 U	--	--
Benzo(b)fluoranthene	µg/L	5.0 U	--	--
Benzo(g,h,i)perylene	µg/L	5.0 U	--	--
Benzo(k)fluoranthene	µg/L	5.0 U	--	--
Biphenyl (1,1-Biphenyl)	µg/L	5.0 U	--	--
bis(2-Chloroethoxy)methane	µg/L	5.0 U	--	--
bis(2-Chloroethyl)ether	µg/L	5.0 U	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5.0 U	--	--
Butyl benzylphthalate (BBP)	µg/L	5.0 U	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW46-12	MW48-13	MW49-13
Sample Name:	WG-017360-041317-MR-047	WG-017360-040717-MR-016	WG-017360-041217-MR-038
Sample Date:	04/13/2017	04/07/2017	04/12/2017

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	10 U	--	--
Carbazole	µg/L	5.0 U	--	--
Chrysene	µg/L	5.0 U	--	--
Di-n-butylphthalate (DBP)	µg/L	5.0 U	--	--
Di-n-octyl phthalate (DnOP)	µg/L	5.0 U	--	--
Dibenz(a,h)anthracene	µg/L	5.0 U	--	--
Dibenzofuran	µg/L	5.0 U	--	--
Diethyl phthalate	µg/L	5.0 U	--	--
Dimethyl phthalate	µg/L	5.0 U	--	--
Fluoranthene	µg/L	5.0 U	--	--
Fluorene	µg/L	5.0 U	--	--
Hexachlorobenzene	µg/L	5.0 U	--	--
Hexachlorobutadiene	µg/L	5.0 U	--	--
Hexachlorocyclopentadiene	µg/L	5.0 U	--	--
Hexachloroethane	µg/L	5.0 U	--	--
Indeno(1,2,3-cd)pyrene	µg/L	5.0 U	--	--
Isophorone	µg/L	5.0 U	--	--
N-Nitrosodi-n-propylamine	µg/L	5.0 U	--	--
N-Nitrosodiphenylamine	µg/L	5.0 U	--	--
Naphthalene	µg/L	5.0 U	--	--
Nitrobenzene	µg/L	5.0 U	--	--
Pentachlorophenol	µg/L	5.0 U	--	--
Phenanthrene	µg/L	5.0 U	--	--
Phenol	µg/L	5.0 U	--	--
Pyrene	µg/L	5.0 U	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW46-12	MW48-13	MW49-13
Sample Name:	WG-017360-041317-MR-047	WG-017360-040717-MR-016	WG-017360-041217-MR-038
Sample Date:	04/13/2017	04/07/2017	04/12/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW50-12	MW51-12	MW52-12
Sample Name:	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:	04/13/2017	04/13/2017	04/13/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	1.7 J
Acetone	µg/L	3.1 J	3.8 J	6.6 J
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	0.52 J	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	0.70 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW50-12	MW51-12	MW52-12
Sample Name:	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:	04/13/2017	04/13/2017	04/13/2017

Parameters	Unit			
Volatile Organic Compounds				
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	2.9
Isopropyl benzene	µg/L	5.0 U	5.0 U	2.1 J
Methyl acetate	µg/L	10 U	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	3.1	1.3	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	0.81 J	0.44 J	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U	4.4
Semivolatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5.0 U	5.0 U	5.4 U
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	5.4 U
2,4,6-Trichlorophenol	µg/L	5.0 U	5.0 U	5.4 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	5.4 U
2,4-Dimethylphenol	µg/L	5.0 U	5.0 U	5.4 U
2,4-Dinitrophenol	µg/L	5.0 U	5.0 U	5.4 U
2,4-Dinitrotoluene	µg/L	5.0 U	5.0 U	5.4 U
2,6-Dinitrotoluene	µg/L	5.0 U	5.0 U	5.4 U
2-Chloronaphthalene	µg/L	5.0 U	5.0 U	5.4 U
2-Chlorophenol	µg/L	5.0 U	5.0 U	5.4 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW50-12	MW51-12	MW52-12
Sample Name:	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:	04/13/2017	04/13/2017	04/13/2017

Parameters**Unit****Semivolatile Organic Compounds**

2-Methylnaphthalene	µg/L	5.0 U	0.18 J	5.4 U
2-Methylphenol	µg/L	5.0 U	5.0 U	5.4 U
2-Nitroaniline	µg/L	5.0 U	5.0 U	5.4 U
2-Nitrophenol	µg/L	5.0 U	5.0 U	5.4 U
3&4-Methylphenol	µg/L	5.0 U	5.0 U	5.4 U
3,3'-Dichlorobenzidine	µg/L	5.0 U	5.0 U	5.4 U
3-Nitroaniline	µg/L	5.0 U	5.0 U	5.4 U
4,6-Dinitro-2-methylphenol	µg/L	5.0 U	5.0 U	5.4 U
4-Bromophenyl phenyl ether	µg/L	5.0 U	5.0 U	5.4 U
4-Chloro-3-methylphenol	µg/L	5.0 U	5.0 U	5.4 U
4-Chloroaniline	µg/L	5.0 U	5.0 U	5.4 U
4-Chlorophenyl phenyl ether	µg/L	5.0 U	5.0 U	5.4 U
4-Nitroaniline	µg/L	5.0 U	5.0 U	5.4 U
4-Nitrophenol	µg/L	5.0 U	5.0 U	5.4 U
Acenaphthene	µg/L	5.0 U	0.51 J	1.1 J
Acenaphthylene	µg/L	5.0 U	5.0 U	5.4 U
Acetophenone	µg/L	1.0 U	1.0 U	1.1 U
Anthracene	µg/L	5.0 U	0.23 J	5.4 U
Atrazine	µg/L	1.0 U	1.0 U	1.1 U
Benzaldehyde	µg/L	1.0 U	1.0 U	1.1 U
Benzo(a)anthracene	µg/L	5.0 U	5.0 U	5.4 U
Benzo(a)pyrene	µg/L	5.0 U	5.0 U	5.4 U
Benzo(b)fluoranthene	µg/L	5.0 U	5.0 U	5.4 U
Benzo(g,h,i)perylene	µg/L	5.0 U	5.0 U	5.4 U
Benzo(k)fluoranthene	µg/L	5.0 U	5.0 U	5.4 U
Biphenyl (1,1-Biphenyl)	µg/L	5.0 U	5.0 U	5.4 U
bis(2-Chloroethoxy)methane	µg/L	5.0 U	5.0 U	5.4 U
bis(2-Chloroethyl)ether	µg/L	5.0 U	5.0 U	5.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5.0 U	5.0 U	5.4 U
Butyl benzylphthalate (BBP)	µg/L	5.0 U	5.0 U	5.4 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW50-12	MW51-12	MW52-12
Sample Name:	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:	04/13/2017	04/13/2017	04/13/2017

Parameters**Unit****Semivolatile Organic Compounds**

Caprolactam	µg/L	10 U	10 U	11 U
Carbazole	µg/L	5.0 U	0.65 J	2.9 J
Chrysene	µg/L	5.0 U	5.0 U	5.4 U
Di-n-butylphthalate (DBP)	µg/L	5.0 U	5.0 U	5.4 U
Di-n-octyl phthalate (DnOP)	µg/L	5.0 U	5.0 U	5.4 U
Dibenz(a,h)anthracene	µg/L	5.0 U	5.0 U	5.4 U
Dibenzofuran	µg/L	0.59 J	0.86 J	5.4 U
Diethyl phthalate	µg/L	5.0 U	5.0 U	5.4 U
Dimethyl phthalate	µg/L	5.0 U	5.0 U	5.4 U
Fluoranthene	µg/L	5.0 U	0.42 J	5.4 U
Fluorene	µg/L	5.0 U	0.40 J	3.2 J
Hexachlorobenzene	µg/L	5.0 U	5.0 U	5.4 U
Hexachlorobutadiene	µg/L	5.0 U	5.0 U	5.4 U
Hexachlorocyclopentadiene	µg/L	5.0 U	5.0 U	5.4 U
Hexachloroethane	µg/L	5.0 U	5.0 U	5.4 U
Indeno(1,2,3-cd)pyrene	µg/L	5.0 U	5.0 U	5.4 U
Isophorone	µg/L	5.0 U	5.0 U	5.4 U
N-Nitrosodi-n-propylamine	µg/L	5.0 U	5.0 U	5.4 U
N-Nitrosodiphenylamine	µg/L	5.0 U	5.0 U	5.4 U
Naphthalene	µg/L	5.0 U	0.36 J	2.3 J
Nitrobenzene	µg/L	5.0 U	5.0 U	5.4 U
Pentachlorophenol	µg/L	5.0 U	5.0 U	5.4 U
Phenanthrene	µg/L	5.0 U	0.61 J	5.4 U
Phenol	µg/L	5.0 U	5.0 U	5.4 U
Pyrene	µg/L	5.0 U	0.23 J	5.4 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW50-12	MW51-12	MW52-12
Sample Name:	WG-017360-041317-MR-044	WG-017360-041317-MR-043	WG-017360-041317-MR-042
Sample Date:	04/13/2017	04/13/2017	04/13/2017

Parameters	Unit			
Metals				
Antimony	mg/L	--	--	--
Arsenic	mg/L	--	--	--
Barium	mg/L	--	--	--
Beryllium	mg/L	--	--	--
Cadmium	mg/L	--	--	--
Chromium	mg/L	--	--	--
Cobalt	mg/L	--	--	--
Copper	mg/L	--	--	--
Iron	mg/L	--	--	--
Lead	mg/L	--	--	--
Manganese	mg/L	--	--	--
Mercury	mg/L	--	--	--
Molybdenum	mg/L	--	--	--
Nickel	mg/L	--	--	--
Selenium	mg/L	--	--	--
Silver	mg/L	--	--	--
Thallium	mg/L	--	--	--
Vanadium	mg/L	--	--	--
Zinc	mg/L	--	--	--

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:		MW58-13	MW59-14	MW59-14
Sample Name:		WG-017360-040717-MR-022	WG-017360-040517-MR-006	WG-017360-040517-MR-007
Sample Date:		04/07/2017	04/05/2017	04/05/2017
				Duplicate
Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U	25 U
2-Hexanone	µg/L	50 U	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U	50 U
Acetone	µg/L	50 U	2.7 J	50 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	14	14
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW58-13	MW59-14	MW59-14
Sample Name:	WG-017360-040717-MR-022	WG-017360-040517-MR-006	WG-017360-040517-MR-007
Sample Date:	04/07/2017	04/05/2017	04/05/2017
			Duplicate
Parameters	Unit		
Volatile Organic Compounds			
Dibromochloromethane	µg/L	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.9
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U
Trifluorotrchloroethane (CFC-113)	µg/L	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U
Semivolatile Organic Compounds			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--
2,4,5-Trichlorophenol	µg/L	--	--
2,4,6-Trichlorophenol	µg/L	--	--
2,4-Dichlorophenol	µg/L	--	--
2,4-Dimethylphenol	µg/L	--	--
2,4-Dinitrophenol	µg/L	--	--
2,4-Dinitrotoluene	µg/L	--	--
2,6-Dinitrotoluene	µg/L	--	--
2-Chloronaphthalene	µg/L	--	--
2-Chlorophenol	µg/L	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW58-13	MW59-14	MW59-14
Sample Name:	WG-017360-040717-MR-022	WG-017360-040517-MR-006	WG-017360-040517-MR-007
Sample Date:	04/07/2017	04/05/2017	04/05/2017
			Duplicate

Parameters	Unit			
Semivolatile Organic Compounds				
2-Methylnaphthalene	µg/L	--	--	--
2-Methylphenol	µg/L	--	--	--
2-Nitroaniline	µg/L	--	--	--
2-Nitrophenol	µg/L	--	--	--
3&4-Methylphenol	µg/L	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--
3-Nitroaniline	µg/L	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--
4-Chloroaniline	µg/L	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--
4-Nitroaniline	µg/L	--	--	--
4-Nitrophenol	µg/L	--	--	--
Acenaphthene	µg/L	--	--	--
Acenaphthylene	µg/L	--	--	--
Acetophenone	µg/L	--	--	--
Anthracene	µg/L	--	--	--
Atrazine	µg/L	--	--	--
Benzaldehyde	µg/L	--	--	--
Benzo(a)anthracene	µg/L	--	--	--
Benzo(a)pyrene	µg/L	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW58-13	MW59-14	MW59-14
Sample Name:	WG-017360-040717-MR-022	WG-017360-040517-MR-006	WG-017360-040517-MR-007
Sample Date:	04/07/2017	04/05/2017	04/05/2017
			Duplicate

Parameters	Unit			
Semivolatile Organic Compounds				
Caprolactam	µg/L	--	--	--
Carbazole	µg/L	--	--	--
Chrysene	µg/L	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--
Dibenzofuran	µg/L	--	--	--
Diethyl phthalate	µg/L	--	--	--
Dimethyl phthalate	µg/L	--	--	--
Fluoranthene	µg/L	--	--	--
Fluorene	µg/L	--	--	--
Hexachlorobenzene	µg/L	--	--	--
Hexachlorobutadiene	µg/L	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--
Hexachloroethane	µg/L	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--
Isophorone	µg/L	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--
Naphthalene	µg/L	--	--	--
Nitrobenzene	µg/L	--	--	--
Pentachlorophenol	µg/L	--	--	--
Phenanthrene	µg/L	--	--	--
Phenol	µg/L	--	--	--
Pyrene	µg/L	--	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW58-13	MW59-14	MW59-14
Sample Name:	WG-017360-040717-MR-022	WG-017360-040517-MR-006	WG-017360-040517-MR-007
Sample Date:	04/07/2017	04/05/2017	04/05/2017
			Duplicate

Parameters	Unit			
Metals				
Antimony	mg/L	--	0.0020 U	0.0020 U
Arsenic	mg/L	--	0.0087	0.0084
Barium	mg/L	--	0.075 J	0.072 J
Beryllium	mg/L	--	0.0010 U	0.0010 U
Cadmium	mg/L	--	0.000066 J	0.0010 U
Chromium	mg/L	--	0.010 U	0.010 U
Cobalt	mg/L	--	0.00083 J	0.00082 J
Copper	mg/L	--	0.0017 J	0.0013 J
Iron	mg/L	--	0.45	0.42
Lead	mg/L	--	0.00073 J	0.00069 J
Manganese	mg/L	--	0.030 J	0.029 J
Mercury	mg/L	--	0.00020 U	0.00020 U
Molybdenum	mg/L	--	0.00041 J	0.00046 J
Nickel	mg/L	--	0.0055 J	0.0052 J
Selenium	mg/L	--	0.0050 U	0.0050 U
Silver	mg/L	--	0.00020 U	0.00020 U
Thallium	mg/L	--	0.0020 U	0.0020 U
Vanadium	mg/L	--	0.0040 U	0.0040 U
Zinc	mg/L	--	0.0097 J	0.0061 J

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW60-14	MW60-14
Sample Name:	WG-017360-041117-MR-032	WG-017360-041117-MR-033
Sample Date:	04/11/2017	04/11/2017
		Duplicate

Parameters	Unit		
Volatile Organic Compounds			
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	25 U
2-Hexanone	µg/L	50 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	50 U
Acetone	µg/L	50 U	50 U
Benzene	µg/L	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U
Chloroethane	µg/L	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1.0 U

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW60-14	MW60-14
Sample Name:	WG-017360-041117-MR-032	WG-017360-041117-MR-033
Sample Date:	04/11/2017	04/11/2017
		Duplicate

Parameters	Unit		
Volatile Organic Compounds			
Dibromochloromethane	µg/L	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U
Isopropyl benzene	µg/L	5.0 U	5.0 U
Methyl acetate	µg/L	10 U	10 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U
Styrene	µg/L	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U
Xylenes (total)	µg/L	3.0 U	3.0 U
Semivolatile Organic Compounds			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--
2,4,5-Trichlorophenol	µg/L	--	--
2,4,6-Trichlorophenol	µg/L	--	--
2,4-Dichlorophenol	µg/L	--	--
2,4-Dimethylphenol	µg/L	--	--
2,4-Dinitrophenol	µg/L	--	--
2,4-Dinitrotoluene	µg/L	--	--
2,6-Dinitrotoluene	µg/L	--	--
2-Chloronaphthalene	µg/L	--	--
2-Chlorophenol	µg/L	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW60-14	MW60-14
Sample Name:	WG-017360-041117-MR-032	WG-017360-041117-MR-033
Sample Date:	04/11/2017	04/11/2017
		Duplicate

Parameters	Unit		
Semivolatile Organic Compounds			
2-Methylnaphthalene	µg/L	--	--
2-Methylphenol	µg/L	--	--
2-Nitroaniline	µg/L	--	--
2-Nitrophenol	µg/L	--	--
3&4-Methylphenol	µg/L	--	--
3,3'-Dichlorobenzidine	µg/L	--	--
3-Nitroaniline	µg/L	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--
4-Bromophenyl phenyl ether	µg/L	--	--
4-Chloro-3-methylphenol	µg/L	--	--
4-Chloroaniline	µg/L	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--
4-Nitroaniline	µg/L	--	--
4-Nitrophenol	µg/L	--	--
Acenaphthene	µg/L	--	--
Acenaphthylene	µg/L	--	--
Acetophenone	µg/L	--	--
Anthracene	µg/L	--	--
Atrazine	µg/L	--	--
Benzaldehyde	µg/L	--	--
Benzo(a)anthracene	µg/L	--	--
Benzo(a)pyrene	µg/L	--	--
Benzo(b)fluoranthene	µg/L	--	--
Benzo(g,h,i)perylene	µg/L	--	--
Benzo(k)fluoranthene	µg/L	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--
bis(2-Chloroethyl)ether	µg/L	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017

Location ID:	MW60-14	MW60-14
Sample Name:	WG-017360-041117-MR-032	WG-017360-041117-MR-033
Sample Date:	04/11/2017	04/11/2017
		Duplicate

Parameters	Unit		
Semivolatile Organic Compounds			
Caprolactam	µg/L	--	--
Carbazole	µg/L	--	--
Chrysene	µg/L	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--
Dibenz(a,h)anthracene	µg/L	--	--
Dibenzofuran	µg/L	--	--
Diethyl phthalate	µg/L	--	--
Dimethyl phthalate	µg/L	--	--
Fluoranthene	µg/L	--	--
Fluorene	µg/L	--	--
Hexachlorobenzene	µg/L	--	--
Hexachlorobutadiene	µg/L	--	--
Hexachlorocyclopentadiene	µg/L	--	--
Hexachloroethane	µg/L	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--
Isophorone	µg/L	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--
N-Nitrosodiphenylamine	µg/L	--	--
Naphthalene	µg/L	--	--
Nitrobenzene	µg/L	--	--
Pentachlorophenol	µg/L	--	--
Phenanthrene	µg/L	--	--
Phenol	µg/L	--	--
Pyrene	µg/L	--	--

Table 2

**Validated Analytical Summary Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Location ID:	MW60-14	MW60-14
Sample Name:	WG-017360-041117-MR-032	WG-017360-041117-MR-033
Sample Date:	04/11/2017	04/11/2017
		Duplicate

Parameters	Unit		
Metals			
Antimony	mg/L	0.0020 U	0.0020 U
Arsenic	mg/L	0.0050 U	0.0050 U
Barium	mg/L	0.016 J	0.017 J
Beryllium	mg/L	0.0010 U	0.0010 U
Cadmium	mg/L	0.0010 U	0.000091 J
Chromium	mg/L	0.0051 J	0.0050 J
Cobalt	mg/L	0.00059 J	0.00060 J
Copper	mg/L	0.0016 J	0.0018 J
Iron	mg/L	0.20 U	0.20 U
Lead	mg/L	0.0030 U	0.0030 U
Manganese	mg/L	0.0036 J	0.0034 J
Mercury	mg/L	0.00020 U	0.00020 U
Molybdenum	mg/L	0.0045 J	0.0046 J
Nickel	mg/L	0.00076 J	0.00073 J
Selenium	mg/L	0.0012 J	0.0010 J
Silver	mg/L	0.00020 U	0.00020 U
Thallium	mg/L	0.0020 U	0.0020 U
Vanadium	mg/L	0.0040 U	0.0040 U
Zinc	mg/L	0.0030 J	0.0040 J

Notes:

J- Estimated concentration

R - Rejected result.

U - Not detected at the associated reporting limit

Table 3

**Analytical Methods
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Parameter	Method	Matrix	Holding Time	
			Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
TCL VOC	SW-846 8260B	Water	-	14
TCL SVOC	SW-846 8270D	Water	7	40
Site-Specific Metals (except Mercury)	SW-846 6020A	Water	-	180
Mercury	SW-846 7470A	Water	-	28

Notes:

Method References:

- SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- TCL - Target Compound List
- VOC - Volatile Organic Compounds
- SVOC - Semi-volatile Organic Compounds

Table 4

**Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Parameter	Analyte	Analysis Date	Blank Result	Sample ID	Original Result	Qualified Result	Units
Metals	Iron	4/18/2017	0.01105 J	WG-017360-041117-MR-032	0.044 JB	0.20 U	mg/L
				WG-017360-041117-MR-033	0.046 JB	0.20 U	mg/L

Notes:

U - Not detected at the associated reporting limit

B - Laboratory qualifier - result detected in associated method blank

J - Estimated concentration

Table 5

**Qualified Sample Results Due to Outlying MS/MSD Results
Semi-Annual Groundwater Monitoring Program
Former Grand Rapids Metal Plant
Wyoming, Michigan
April 2017**

Parameter	Sample ID	Analyte	MS	MSD	RPD (percent)	Control Limits		Qualified Result	Units
			% Recovery	% Recovery		% Recovery	RPD		
TCL SVOC	WG-017360-041317-MR-046	3,3'-Dichlorobenzidine	0	0	0	30-120	30	R	µg/L

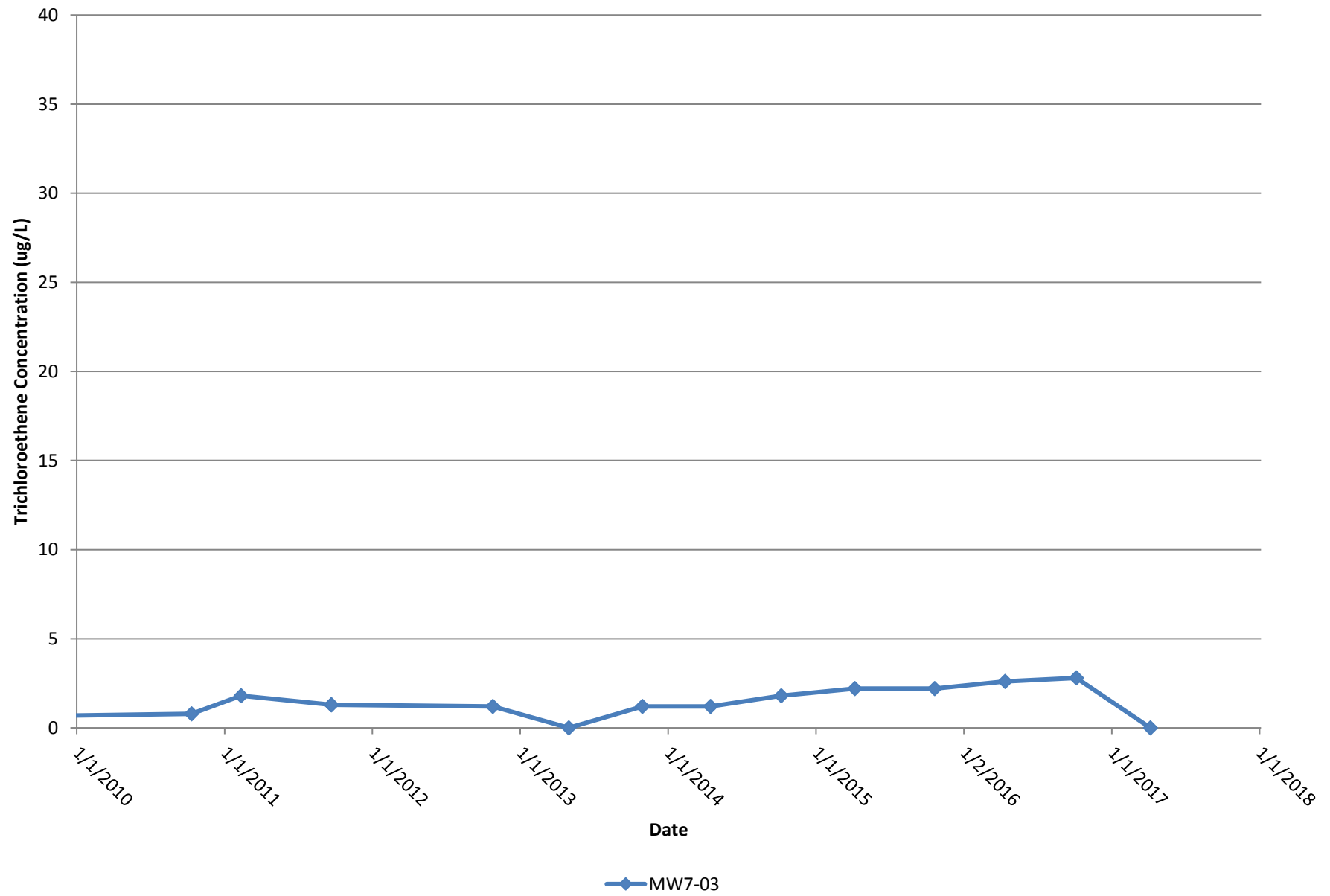
Notes:

MS - Matrix Spike
 MSD - Matrix Spike Duplicate
 RPD - Relative Percent Difference
 TCL - Target Compound List
 SVOC - Semi-volatile Organic Compounds
 R - Rejected

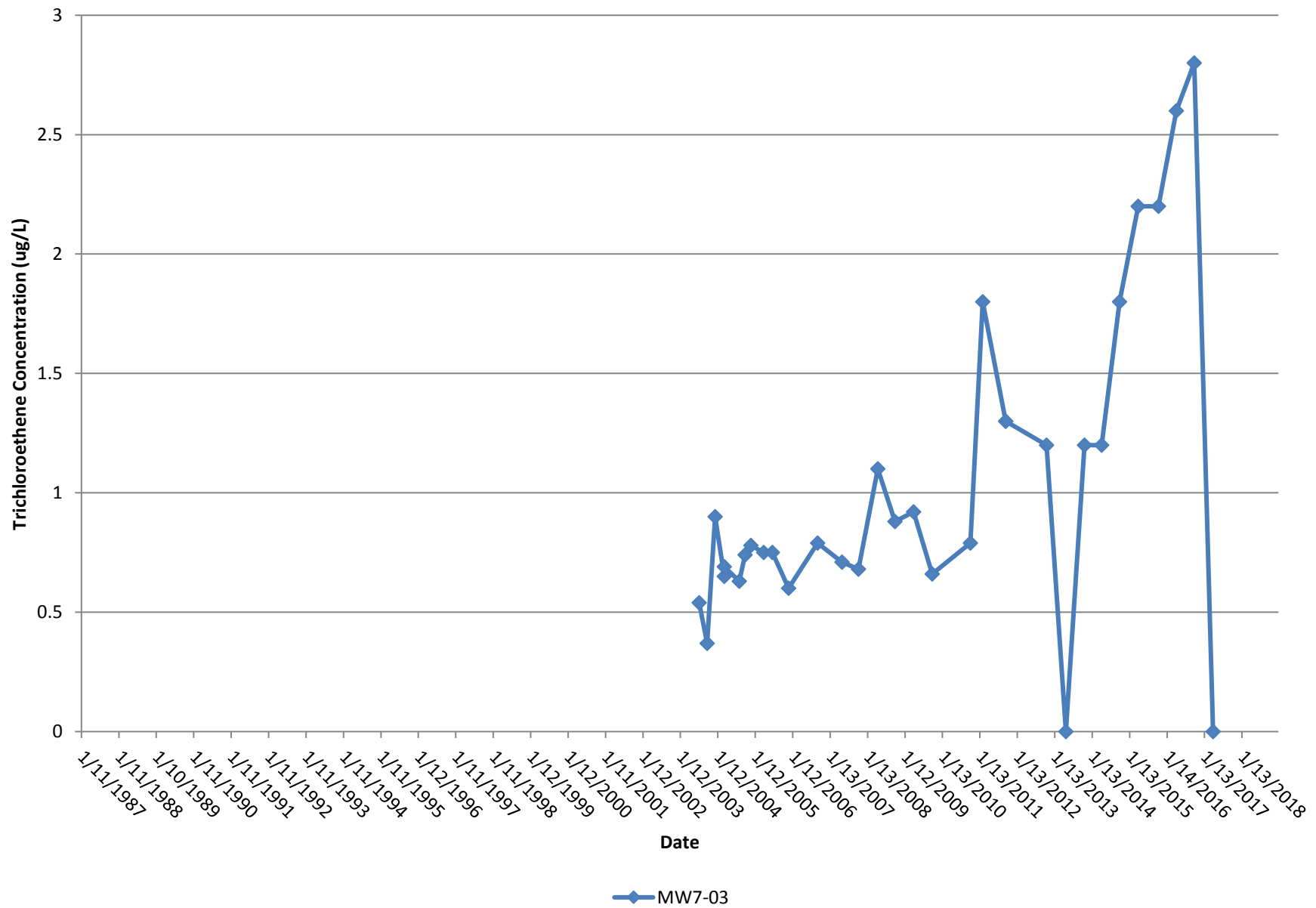
Attachment C

TCE Graphs

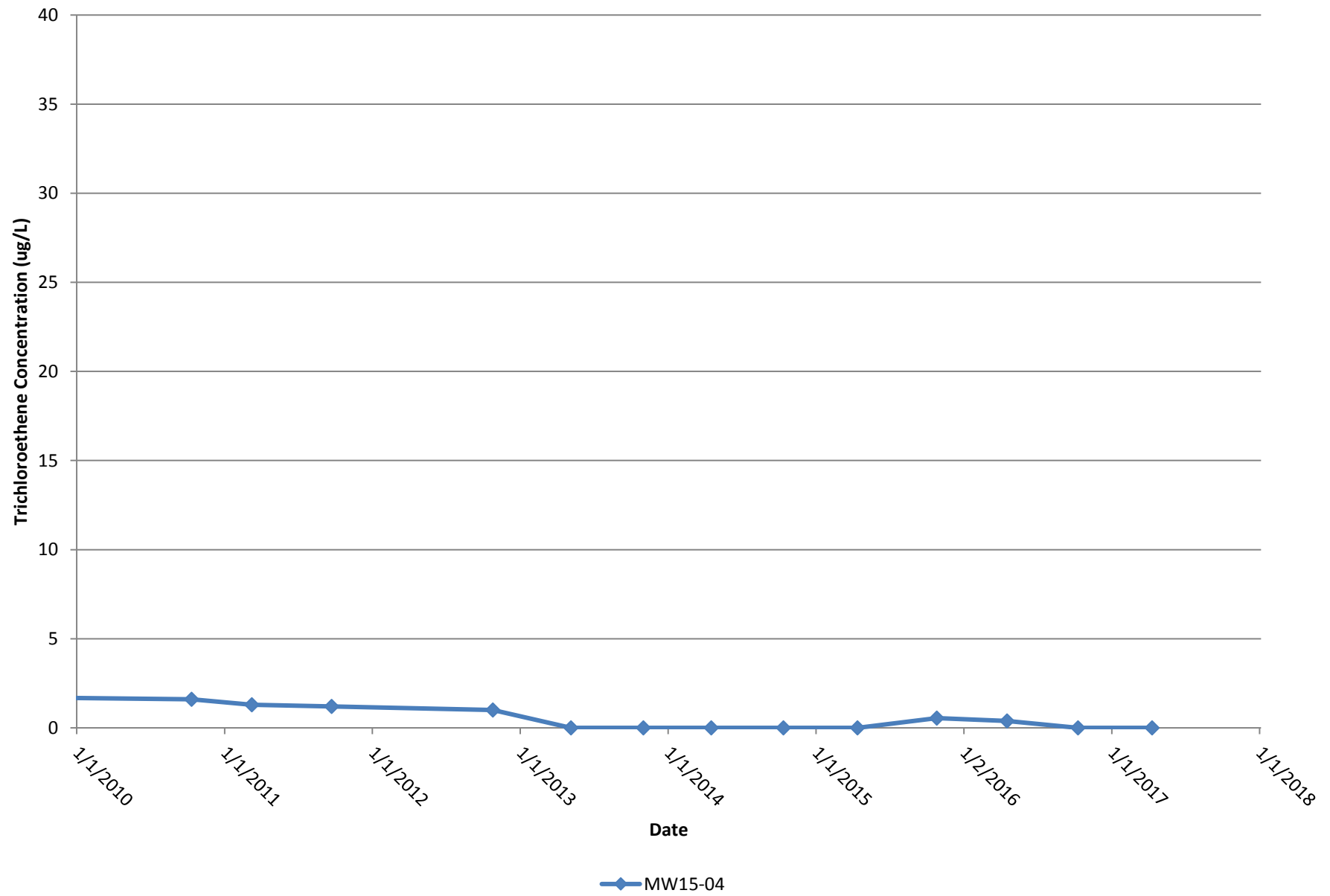
Location MW7-03



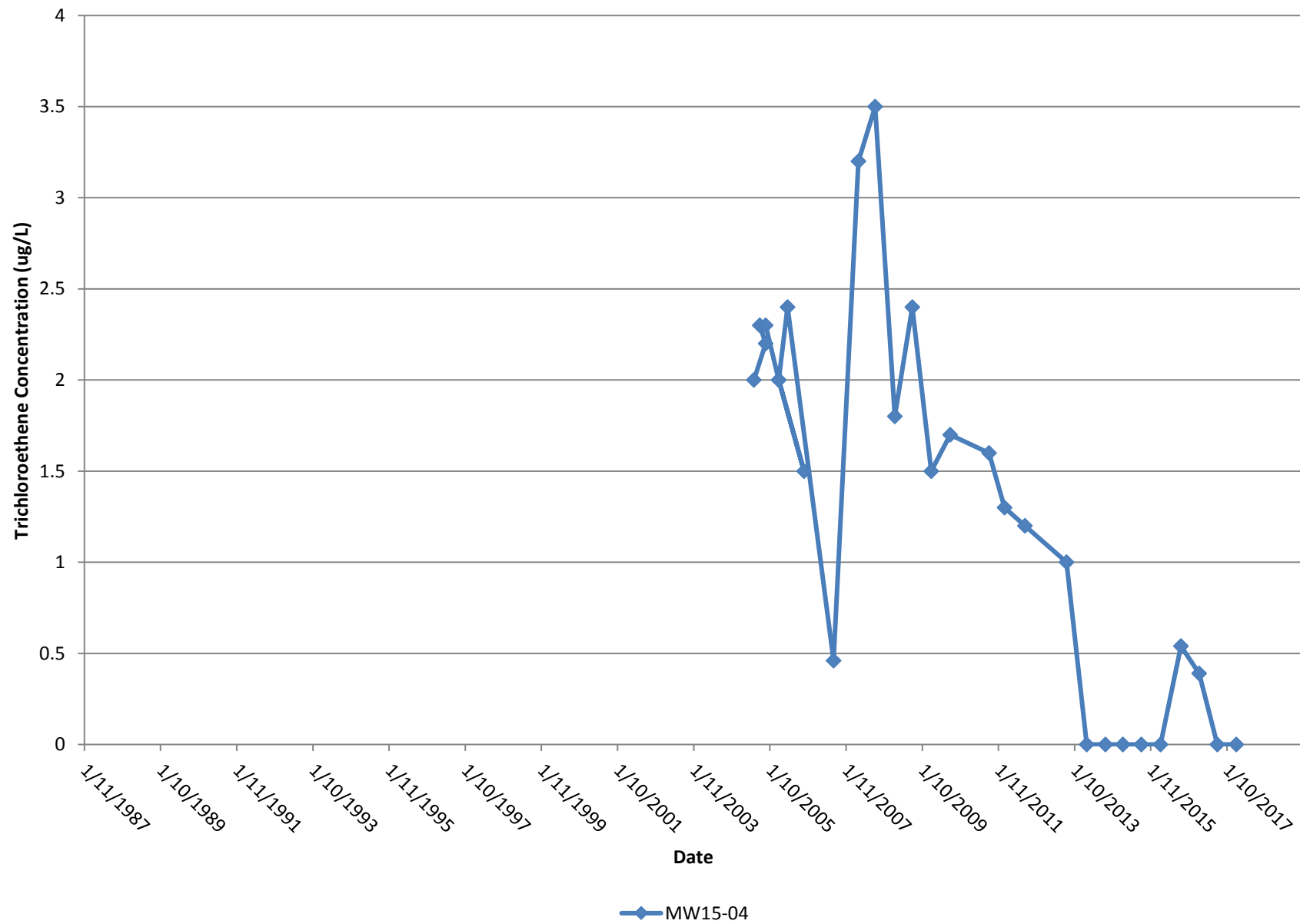
Location MW7-03



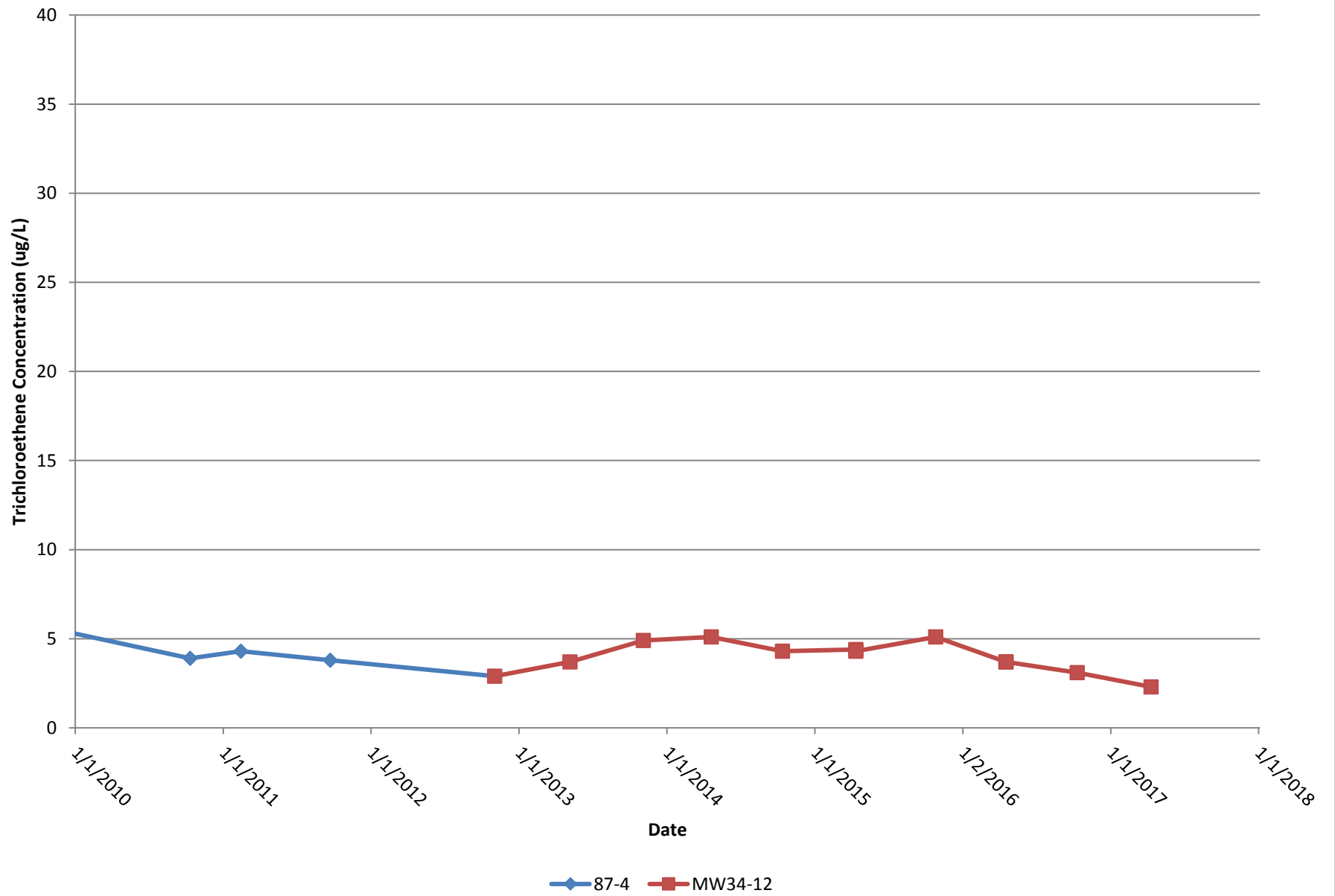
Location MW15-04



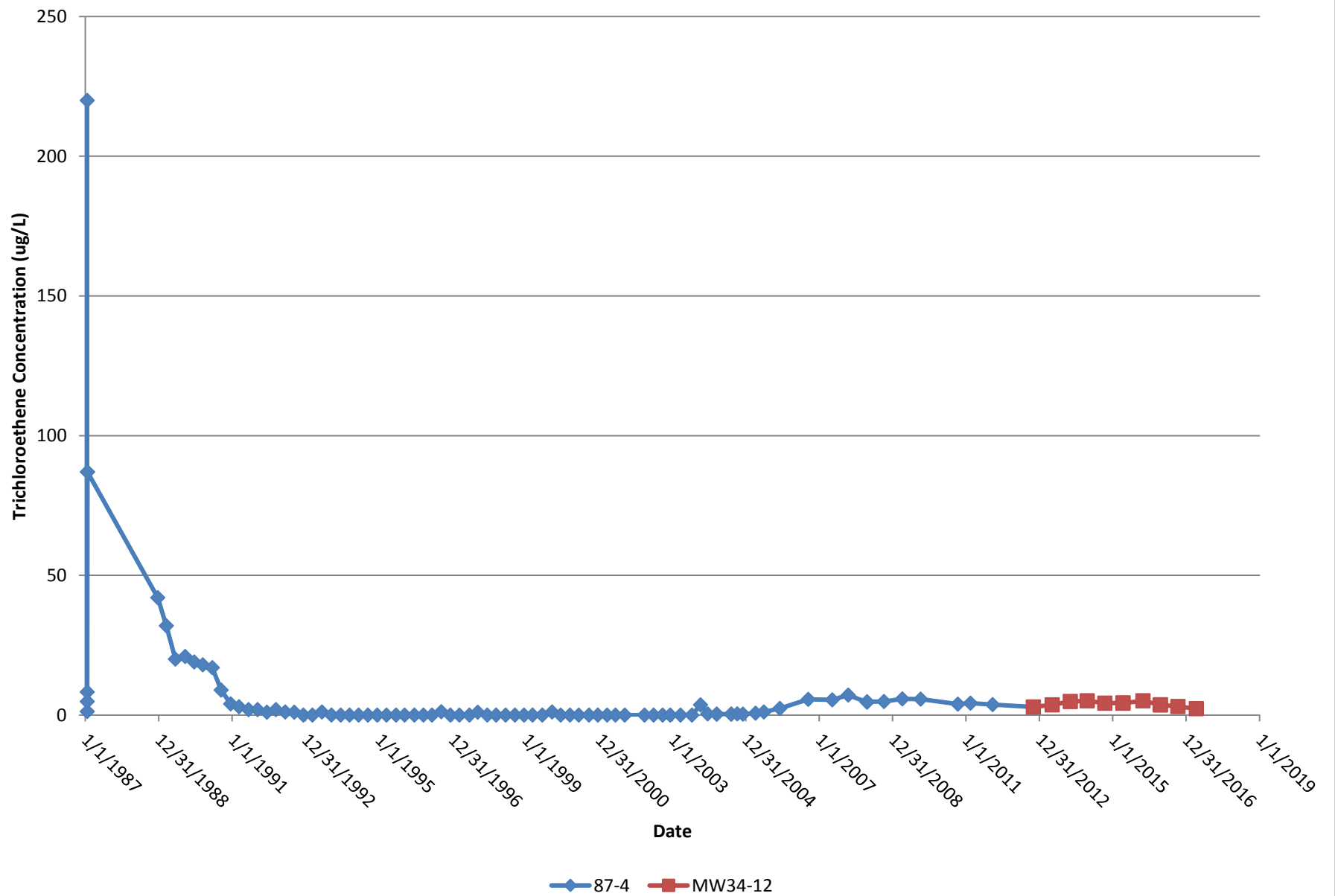
Location MW15-04



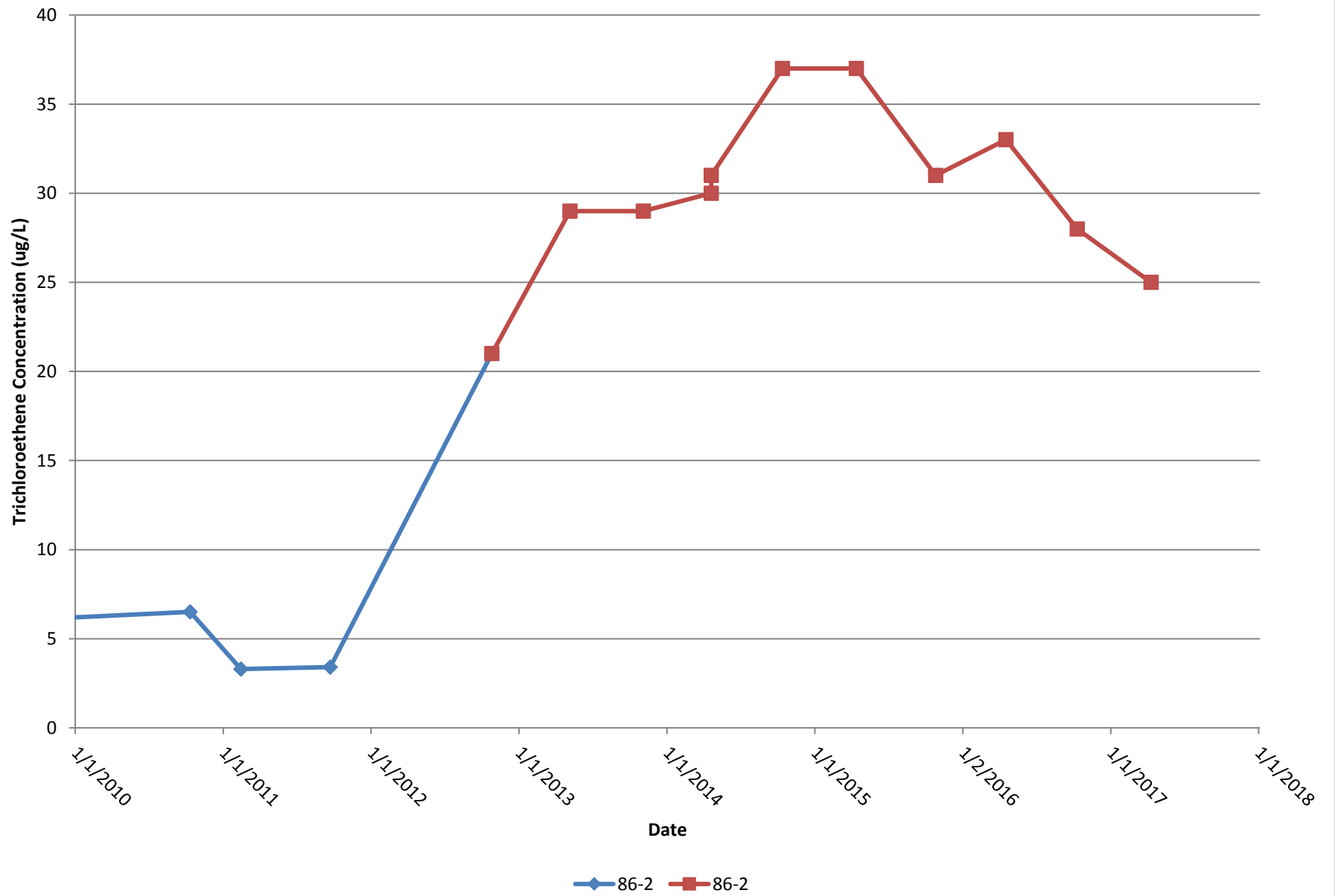
Locations 87-4 and MW34-12



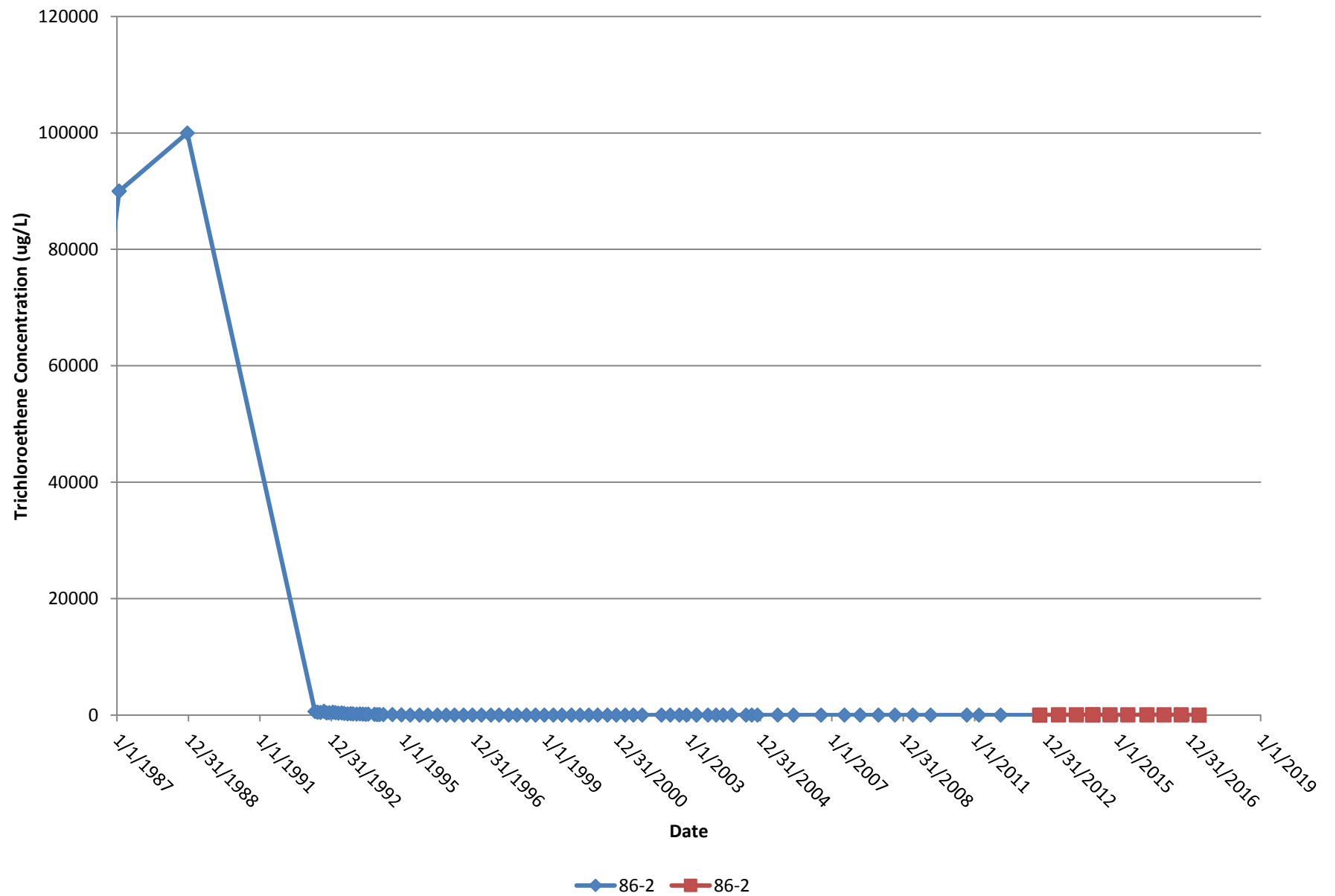
Locations 87-4 and MW34-12



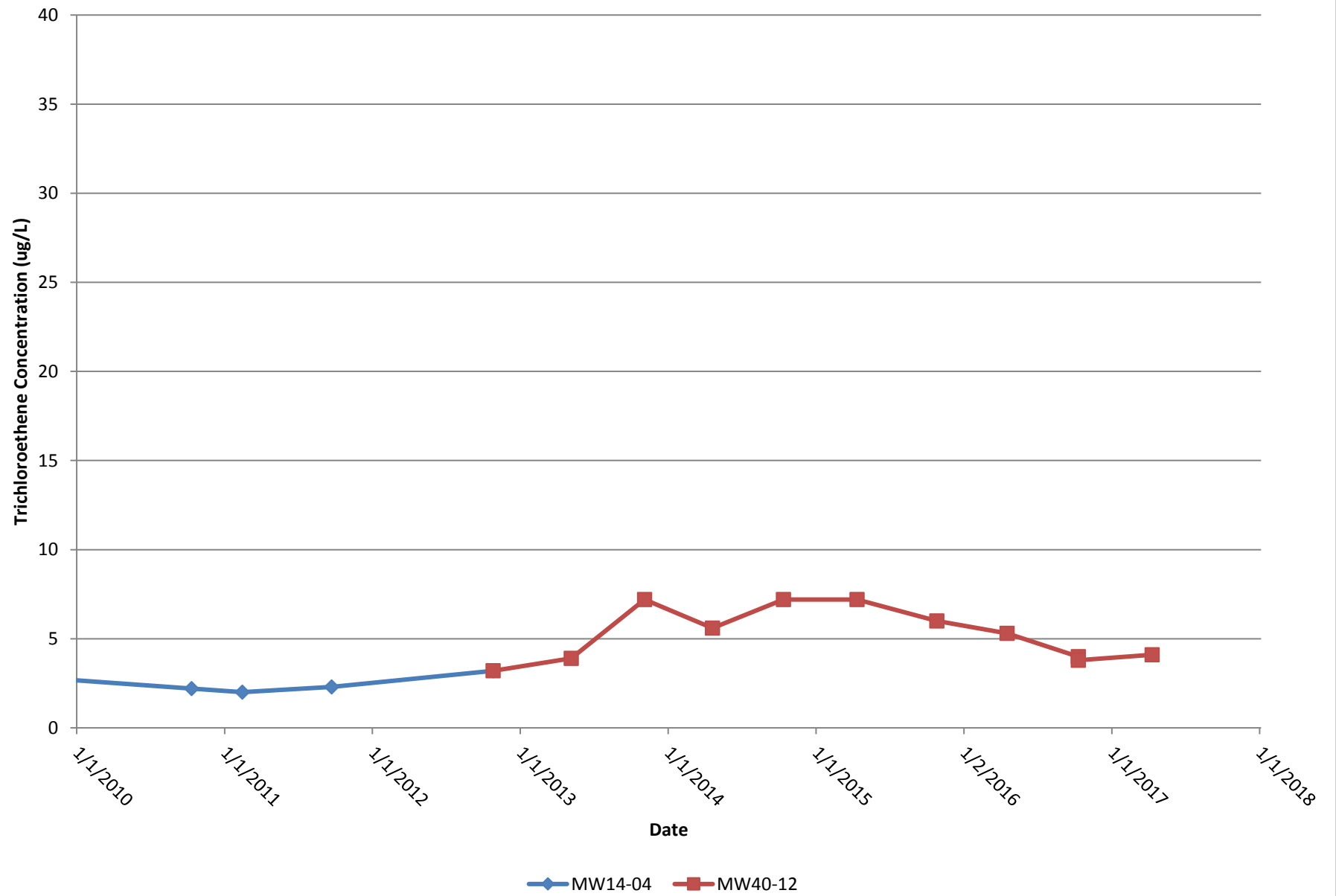
Locations 86-2 and MW35-12



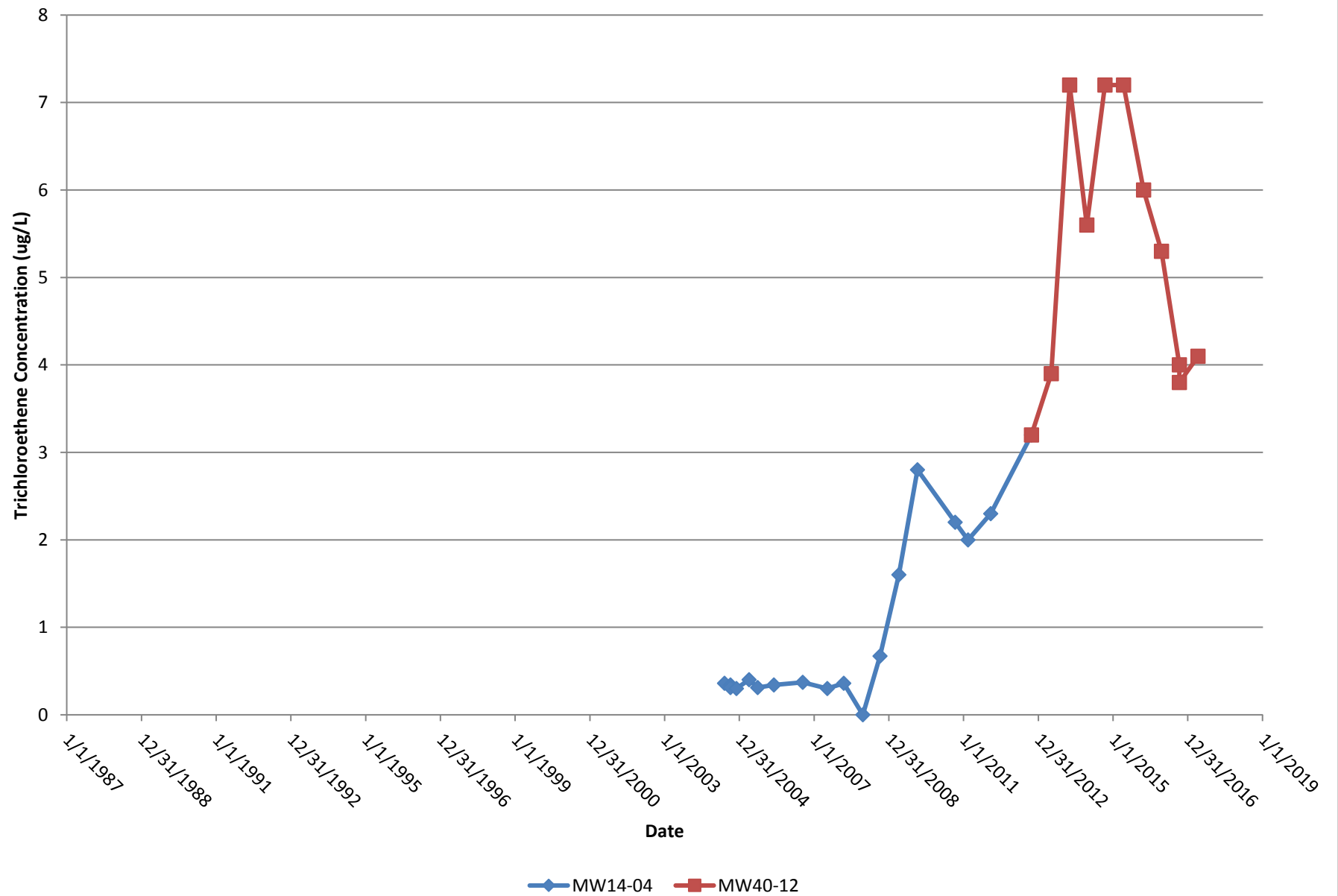
Locations 86-2 and MW35-12



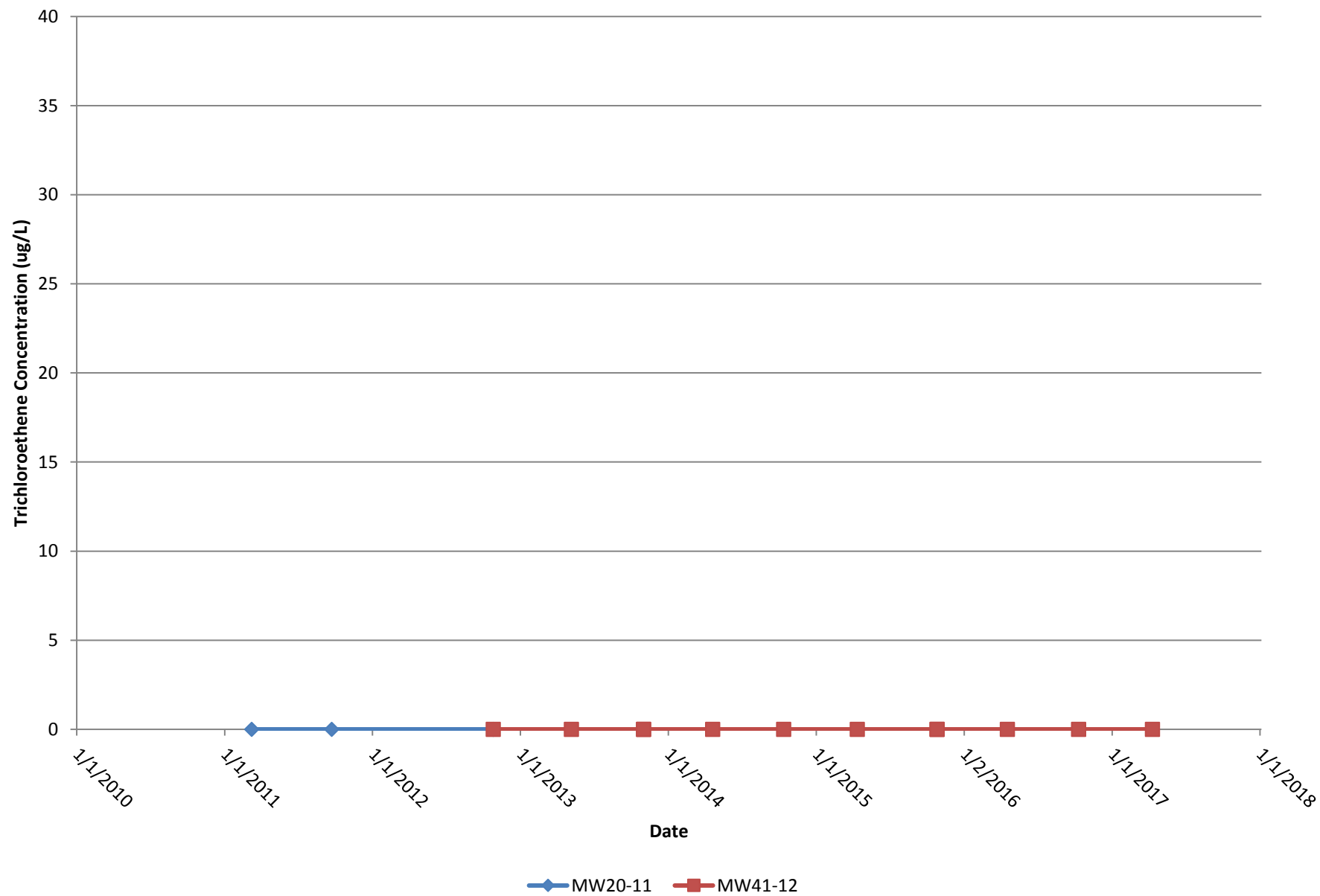
Locations MW14-04 and MW40-12



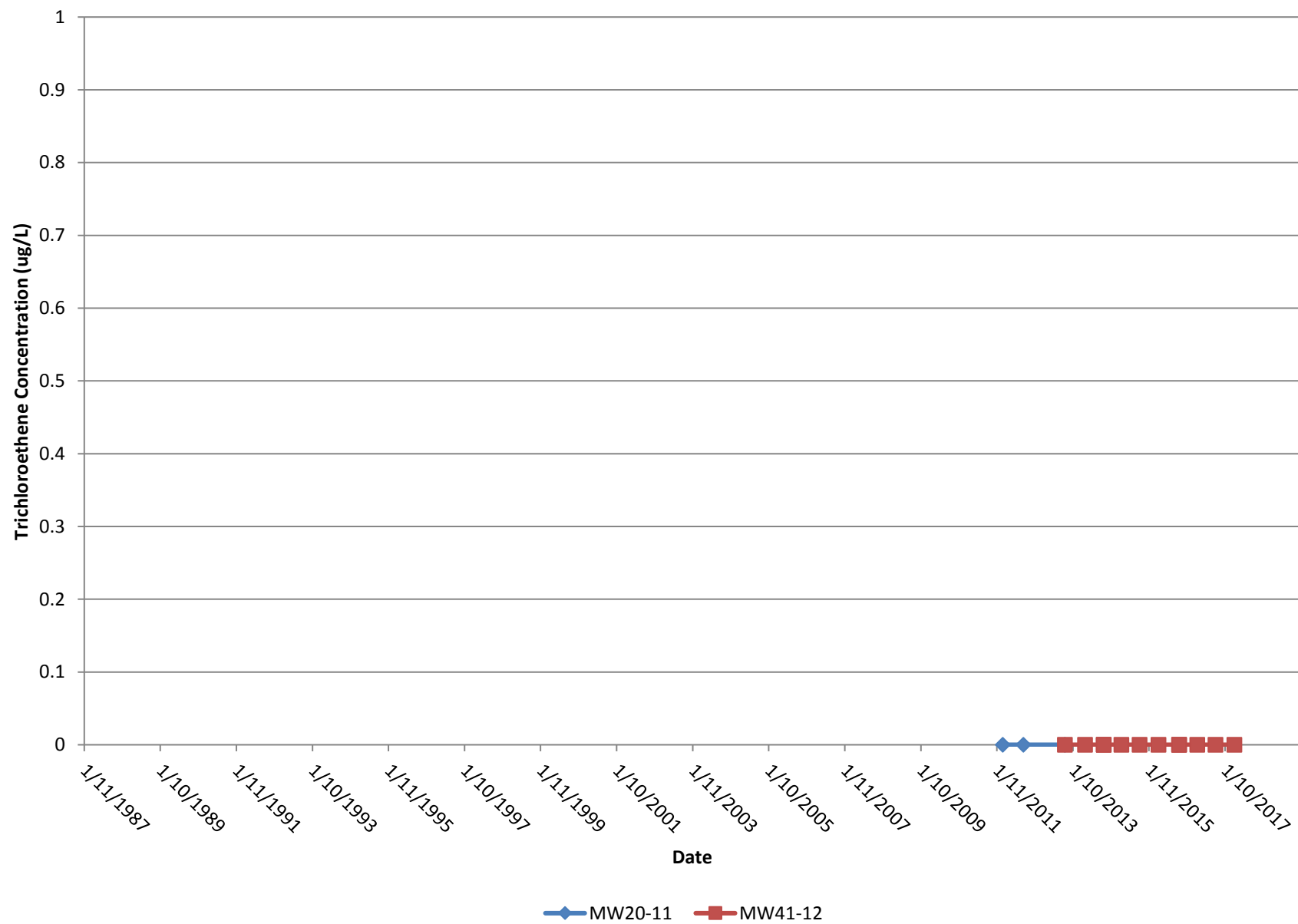
Locations MW14-04 and MW40-12



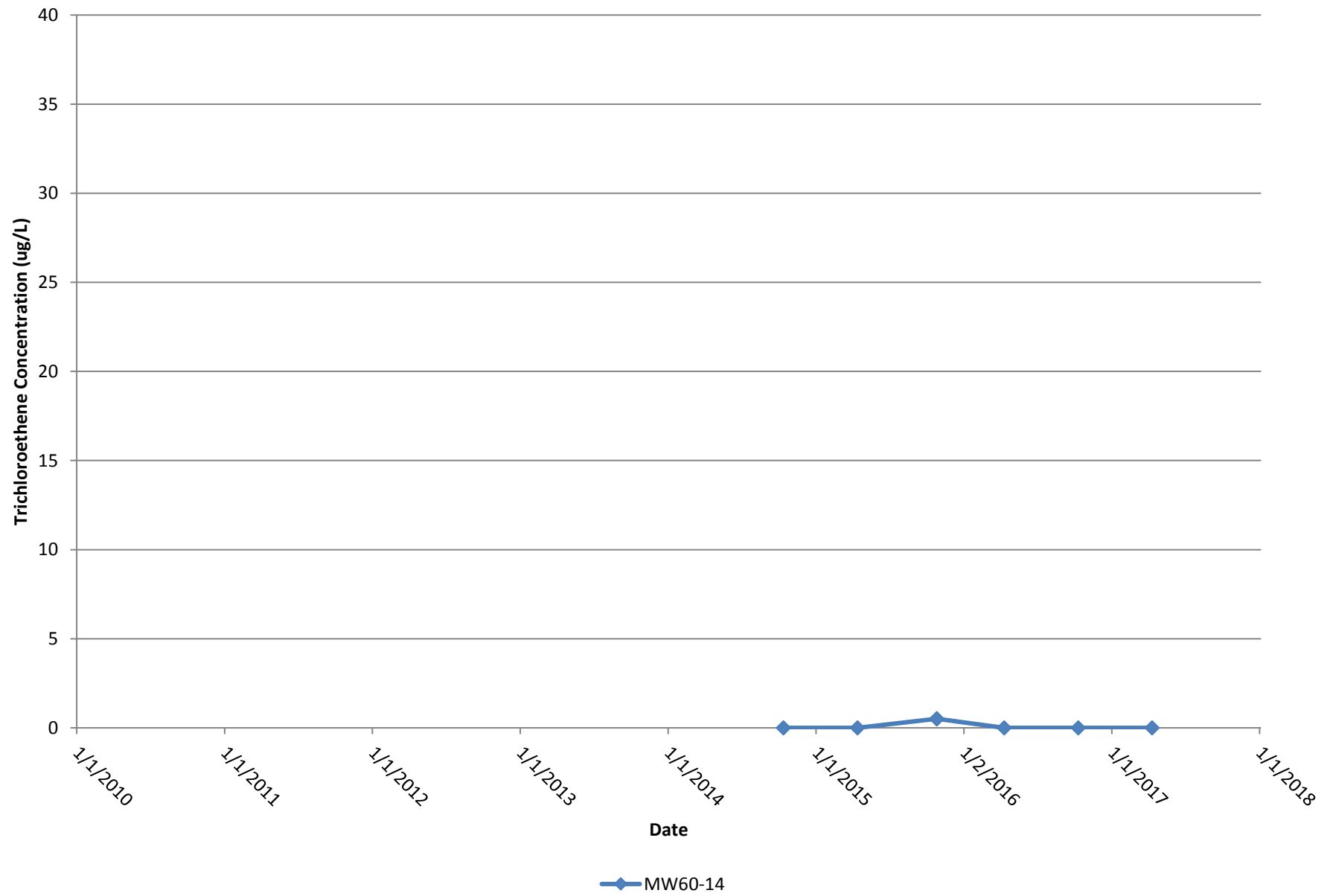
Locations MW20-11 & MW41-12



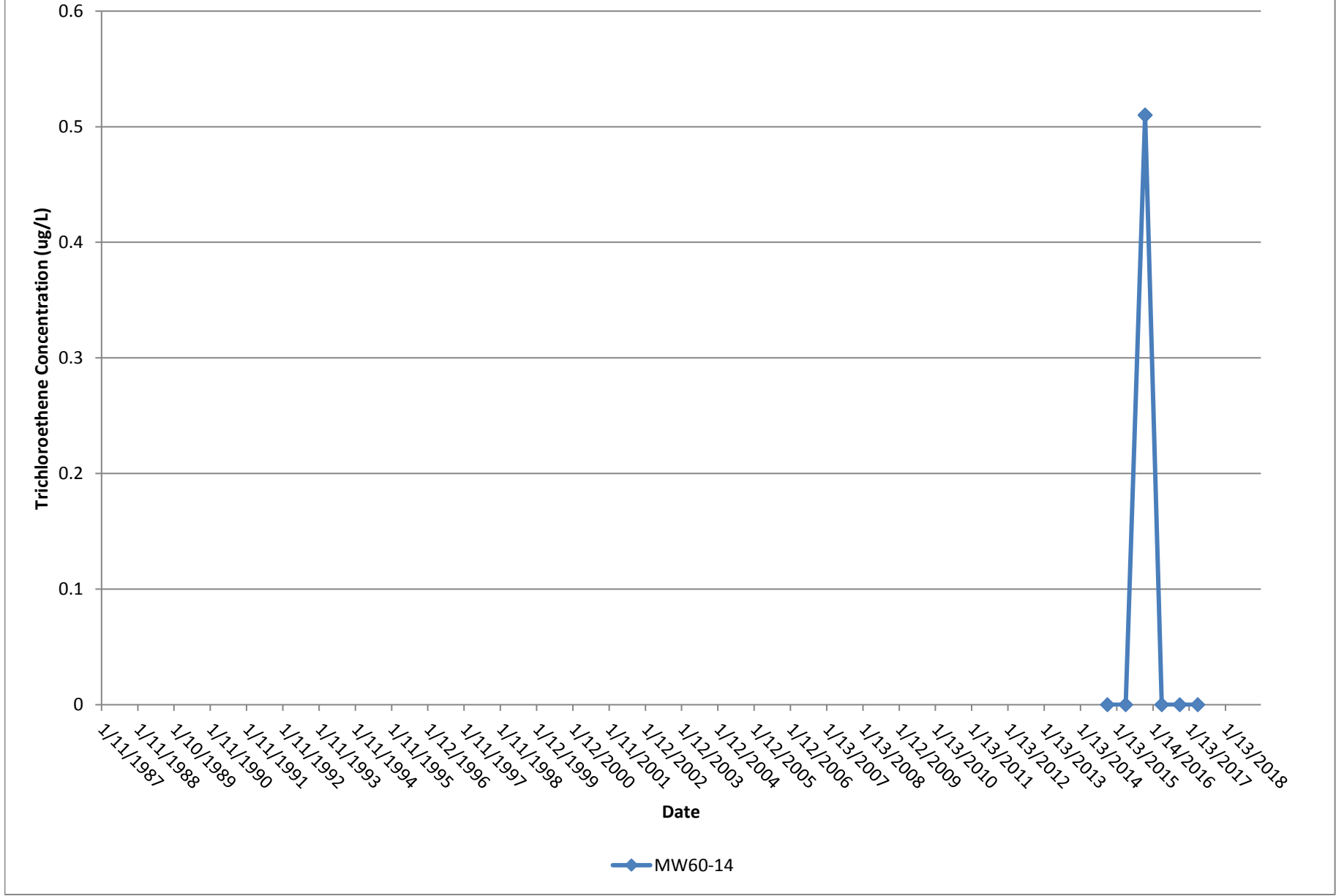
Locations MW20-11 & MW41-12



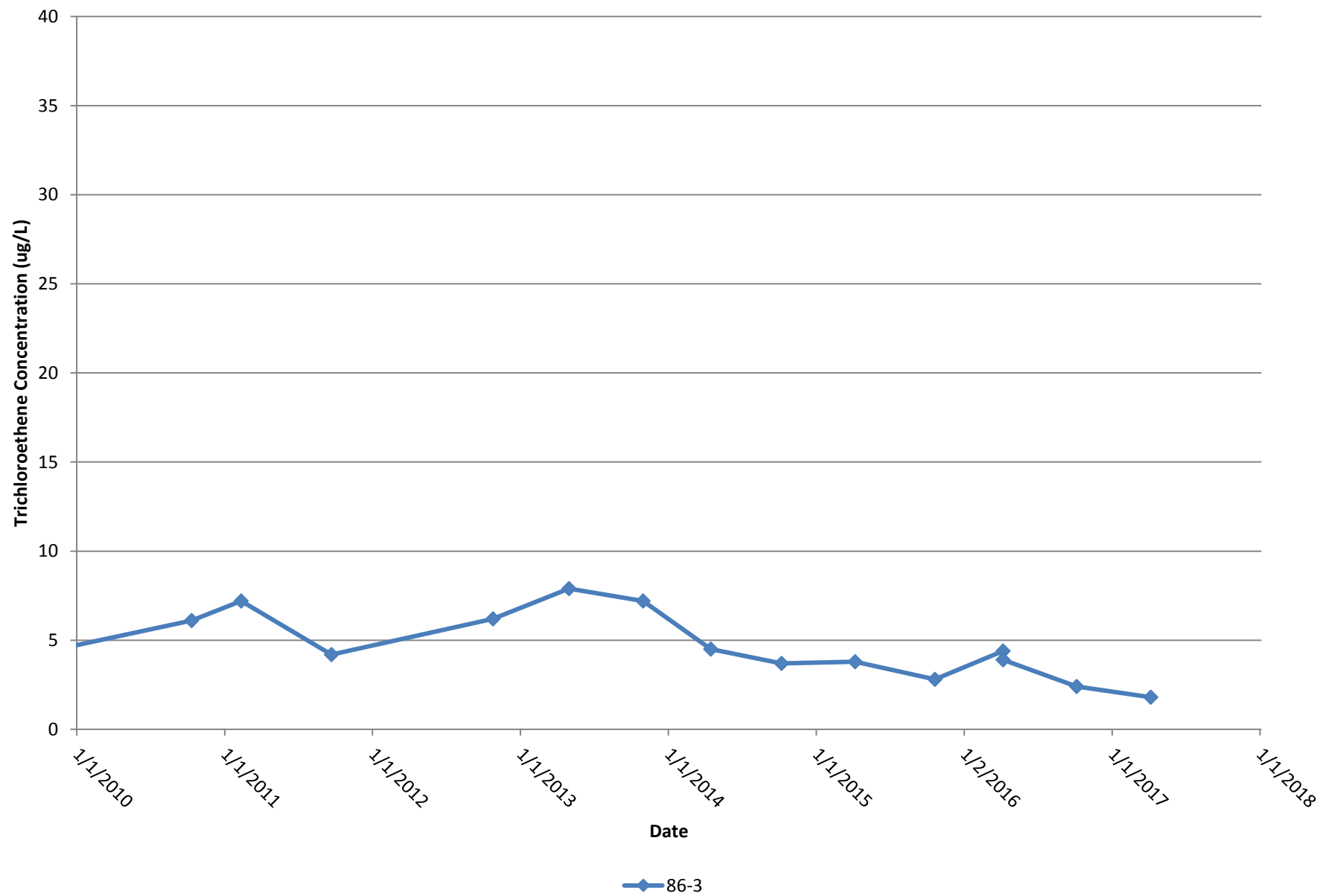
Location MW60-14



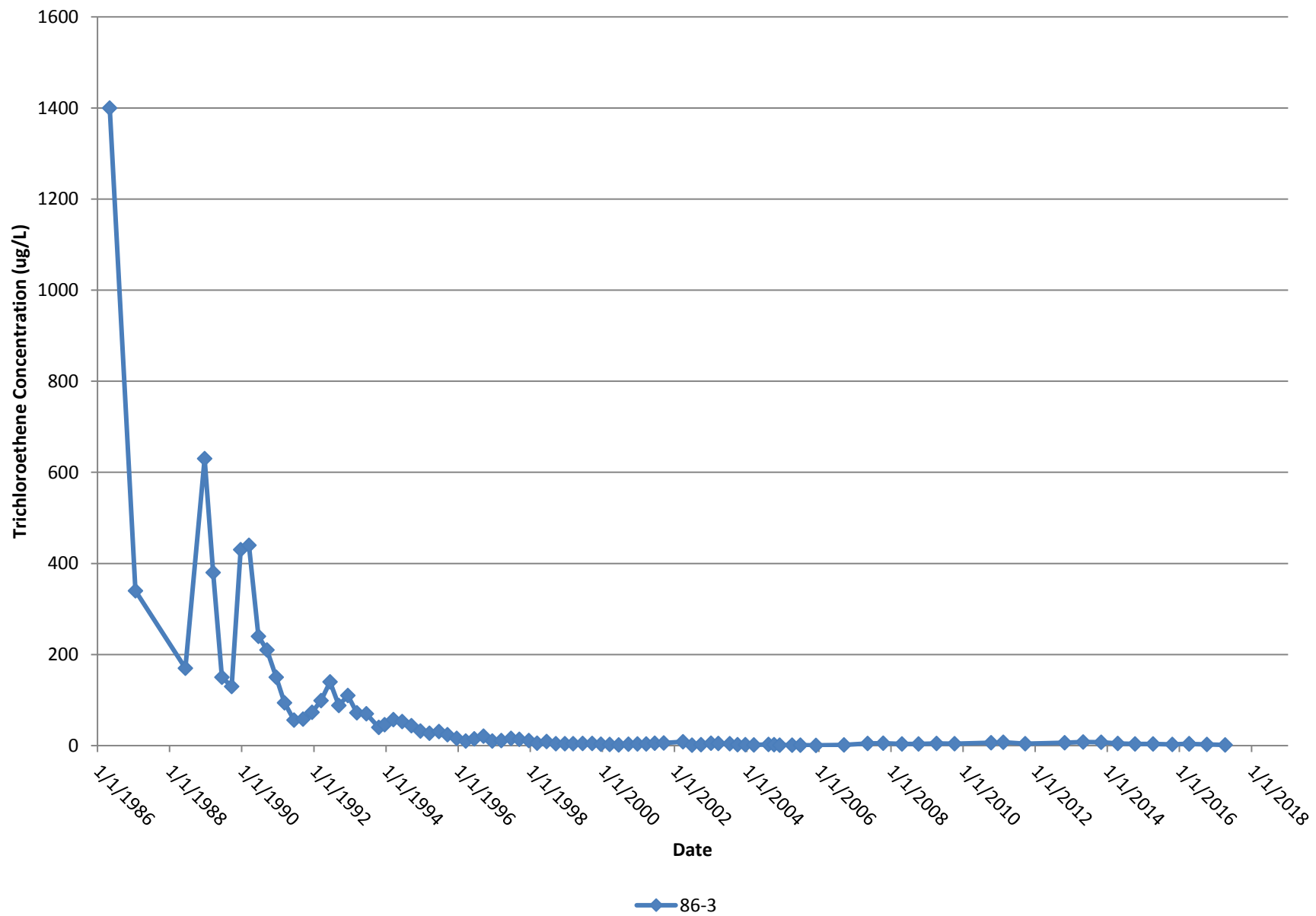
Location MW60-14



Location 86-3



Location 86-3



www.ghd.com

