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Our ref: 11208058

January 20, 2022

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Michigan Department of Environment, Great Lakes, and Energy
Remediation and Redevelopment Division
Saginaw Bay District Office
401 Ketchum Street, Suite B
Bay City, Michigan 48708

2021 Annual Technical Progress Report Submittal
RACER Trust Bay City Powertrain Industrial Land

GHD has prepared this 2021 Annual Technical Progress Report (Annual Report) for the Revitalizing Auto Communities Environmental Response Trust (RACER) Bay City Powertrain Industrial Land (Site) located in Bay City, Michigan.

This Annual Report covers the RACER Site for the period from November 16, 2020 through November 15, 2021, unless otherwise noted in the report. Included as part of this submittal, as applicable, are descriptions of actions related to the implementation of the Feasibility Study/Remedial Action Plan (FS/RAP), supplemental response actions and operation, maintenance, and monitoring activities. This annual report summarizes activities related to these action plans, outlines project status, and details any difficulties encountered during the implementation of the action plans.

1. Summary of On-Going Activities and Project Status

The following sections summarize the activities performed related to implementation of the RAP, supplemental response actions, and operation, maintenance, and monitoring, and details any difficulties encountered during the implementation of the action plans.

1.1 Remedial Action Plan

RAP operation and maintenance activities are being implemented for the Site.

A groundwater treatment system has been designed to provide operational independence from the treatment system at the neighboring General Motors LLC facility which previously treated groundwater and stormwater from the RACER Site. The need for this system resulted from the outcome of the General Motors Corporation (GMC) June 2009 bankruptcy (i.e., RACER received ownership of the Site and GM LLC obtained ownership of the adjacent operating facility). The construction of the system was initiated in November 2012 and was fully commissioned in April 2015. New groundwater extraction pumps and associated well upgrades were completed as part of the new groundwater treatment system construction.

1.1.1 Operation and Maintenance Activities

An initial Monitoring, Operation, and Maintenance Plan (O&M Plan) was submitted on behalf of GMC in November 2000 to Michigan Department of Environmental Quality (MDEQ now referred to as Michigan Department of Environmental, Great Lakes, and Energy [EGLE]). Revised O&M Plan sections were submitted on behalf of GMC to MDEQ in June 2001, conditionally approved by MDEQ on November 27, 2001, and the final O&M Plan was submitted on behalf of GMC in January 2002 and subsequently approved by MDEQ. Specific O&M activities for the new RACER groundwater treatment system were added to the existing O&M Plan after the commissioning of the treatment system in April 2015 and a revised Operation, Maintenance, and Monitoring Plan manual was submitted on behalf of RACER to MDEQ on November 14, 2016.

1.1.2 Operation and Maintenance Activities–Groundwater Extraction System

Extraction well details and water elevations are presented in Table 1. Groundwater Monitoring well details and annual water elevations are presented in Table 2. Monthly maintenance activity checklists are presented in Attachment A.

The groundwater treatment system operated regularly during the 12-month period covered by this report, except when it was down for maintenance. At the end of the last reporting period a new pump with a higher flow rate was installed to replace the existing feed pump to improve treatment flows. GHD continued to evaluate the system and noted that discharge from the system remained low, which was related to the operation of the EW15 pump. In August 2021 the pump in EW15 was also replaced with a new pump with a higher flow rate. Following installation of the new pump in EW15, the average treatment system flow doubled from 0.35 gpm to 0.7 gpm. GHD continues to evaluate ways to increase the treatment flow rate. Groundwater levels in the entire Crotty Street Channel (CSC) are lowered through the operation of a pump in CSC extraction well EW-15, since the entire CSC is hydraulically well connected due to the porous nature of the soils (backfill was pea gravel and sand) in the CSC. In addition, groundwater levels in the Machine Storage Area (MSA) are lowered through the operation of pumps in MSA extraction wells EW-6, EW-8, and EW12, which discharge to EW-15. The pump in EW-15 directs water to the RACER groundwater treatment system where the extracted water is treated before being discharged to the City of Bay City sanitary sewer system.

1.1.3 Operation and Maintenance Activities – Groundwater Treatment System

From February 2015, when the groundwater treatment system was fully commissioned, through November 15, 2021 approximately 1,219,435 gallons of groundwater were treated and discharged to the City of Bay City under Industrial User Discharge Permit (120807). Semi-annual discharge compliance sampling was completed on December 10, 2020 and June 23, 2021. There were no exceedances of permit discharge standards observed, as presented in Table 3.

1.1.4 Saginaw River Levels

Saginaw River water levels have been recorded downstream from the RACER Property at Essexville by the National Oceanic and Atmospheric Administration (NOAA) from 1977 until 2005. Due to the unavailability of the data from the NOAA website, data was obtained from USGS station (04157065 Saginaw River at Weadock Road at Essexville, MI) and used for water elevation data of the Saginaw River, as of November 1, 2005. On December 4, 2013, USGS station 04157065 was removed from service so data was obtained from USGS station (04157060 Saginaw River at Midland Road at Bay City, MI) and used for water elevation data for the Saginaw River, as of November 16, 2013. On September 3, 2017 USGS station 04157060 was destroyed. GHD is currently exploring other options for measuring the Saginaw River water levels and will include manual

measurements from the top of the sheetpile wall (SG-6) in their monthly inspections going forward until another USGS station is installed or another source of Saginaw River water levels is identified.

Based on the combined NOAA and USGS data from 1977 to September 2, 2017, the average Saginaw River water level was approximately 578.89 feet (ft) above mean sea level (AMSL). Recent water levels were above the average, as the current water level measured at SG-6 on October 25, 2021 was 580.94 ft AMSL.

1.1.5 Extraction System/Groundwater Monitoring Activities

Table 4 presents the sample results for the semi-annual extraction system discharge samples (i.e., the groundwater treatment system influent). The 21st annual groundwater sampling event was conducted in August 2021. Table 5 presents the 21st annual groundwater sampling event analytical results summary. Table 3 presents the analytical results for the semi-annual samples collected from the groundwater treatment system effluent. Figure 1 presents the locations sampled for chemical analysis. Figure 2 presents the location where depth-to-water measurements for groundwater are monitored. Groundwater elevations, based on depth-to-water measurements are presented in Tables 1 and 2 for extraction wells and monitoring wells, respectively. Groundwater elevations, based on the depth-to-water measurements collected on August 20, 2021 are presented on Figure 3.

A summary of the last 10 years of analytical groundwater data is presented in Attachment B. The laboratory data reports for all chemical analysis conducted in the reporting period (November 16, 2020 to November 15, 2021) and data validation for the 2021 annual sampling event are presented in Attachment C.

A review of past 10 years of groundwater sample results reveals that only two monitoring well locations (LMW13S for the past 10 years and MW102D2 in 2020) had reported concentrations above the MDEQ Part 201 Residential and Non-Residential Drinking Water Criteria for PCBs of 0.5 (parts per billion) ppb and groundwater results were reported above the MDEQ Part 201 Groundwater Surface Water Interface Criteria for PCBs of 0.2 ppb at MW102D1 (various times over the past 10 years), at MW102D2 (in 2017 and 2020), at LMW13S (for the past 10 years), and at LMW15D (once in 2018).

1.2 Supplemental Response Actions

A Declaration of Restrictive Covenant for the Site was recorded with the Bay County Register of Deeds on November 17, 2015. The location and content of permanent markers were reviewed and approved by MDEQ on November 4, 2015.

A Corrective Measures Remedial Action Plan Completion Report was prepared and submitted to MDEQ for review on September 23, 2016. MDEQ approved RCRA Corrective Action Complete with Controls (RCRA Corrective Action Event Code CA900CR) on September 28, 2016.

Modifications to stormwater management at the Site are necessary as a result of the GMC bankruptcy process. The needed stormwater work and other recent information affect completed corrective measures and the affects will be addressed with EGLE.

2. Proposed Modifications to the Monitoring Program

No modifications are proposed at this time.

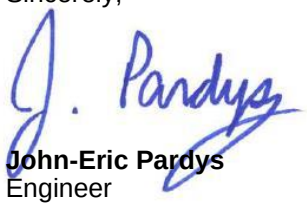
3. Schedule

All activities have been completed within the required time frames.

As part of the 2022 monitoring program, RACER will continue to perform monthly extraction and treatment system inspections and regular pump maintenance, as necessary. RACER will also collect semi-annual groundwater treatment system influent samples (to be completed in April and August 2022) and semi-annual effluent samples. The 2022 annual groundwater monitoring event will be completed in August 2022.

Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,



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Engineer

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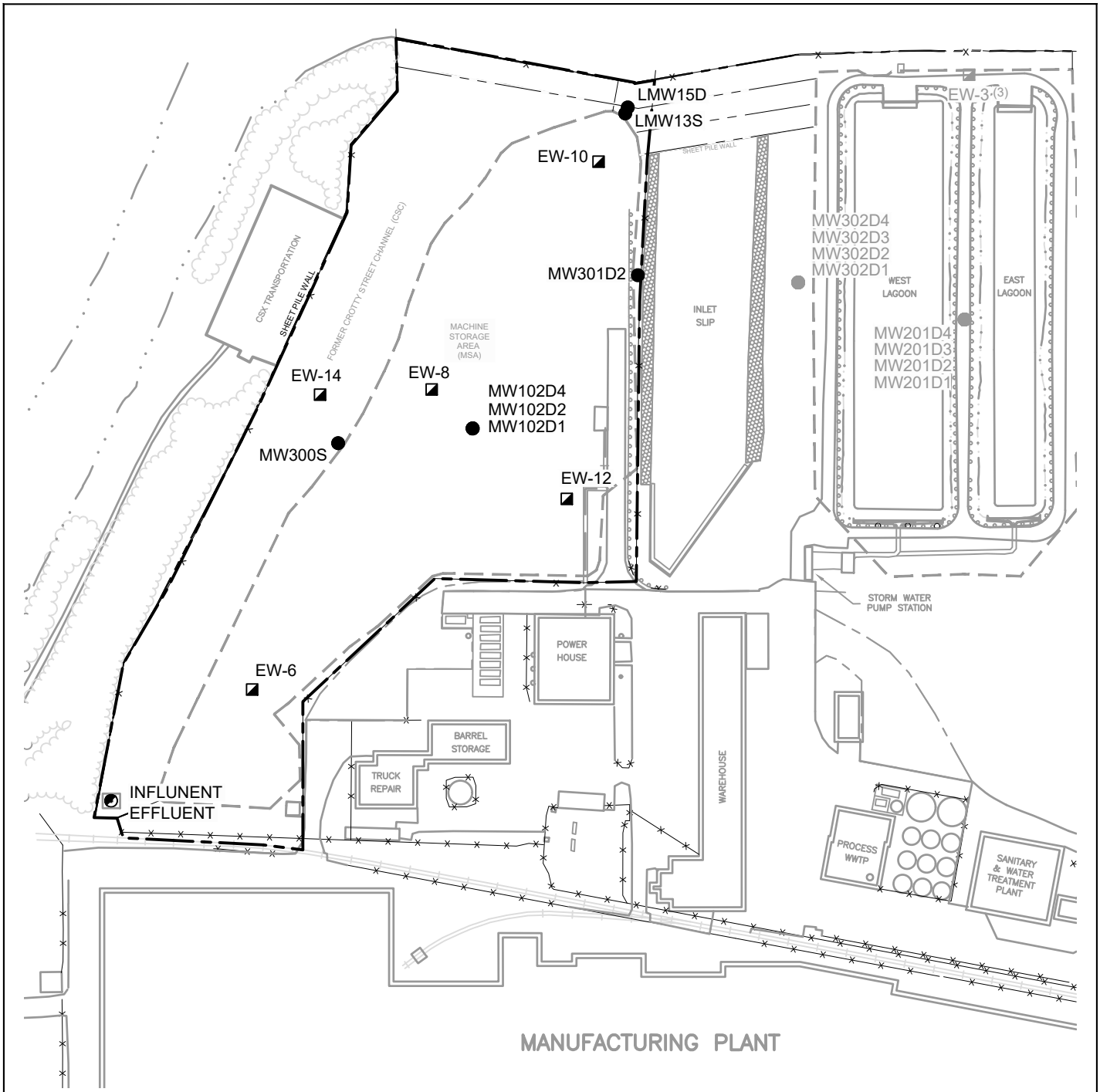
Encl.

Figure 1	Chemical Analysis Monitoring Locations
Figure 2	Water Elevation Monitoring Locations
Figure 3	Shallow Groundwater Elevations – August 20, 2021
Table 1	Groundwater Extraction System Water Elevations
Table 2	Monitoring Well Completion Details and Groundwater Elevations
Table 3	Analytical Results Summary–Groundwater Treatment System Effluent Sampling
Table 4	Analytical Results Summary–Extraction System Sampling
Table 5	Analytical Results Summary–Annual Sampling
Table 6	Summary of Long Term Groundwater and Stormwater Monitoring Activities
Attachment A	Maintenance Activity Checklists
Attachment B	Analytical Results Summary (2012 to 2021)
Attachment C	Laboratory Reports and Data Validation Memorandums

Copy to: Richard Finn, City of Bay City
Jill Edelbrock, EGLE
Grant Trigger, RACER Trust
Dave Favero, RACER Trust
Michael Tomka, GHD

Figures



LEGEND

- FENCE
- GUARDRAIL
- RAILROAD
- TREELINE
- SHORELINE
- BARRIER (DEEP SOIL MIXING)
- SHEET PILE WALL
- APPROXIMATE RACER PROPERTY BOUNDARY

MW403S ● MONITORING WELL LOCATION
EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION
◐ GROUNDWATER TREATMENT SYSTEM SAMPLE LOCATION

0 100 200 ft

N

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RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

Project No. **11208058**
Date **January 2022**

CHEMICAL ANALYSIS MONITORING LOCATIONS

FIGURE 1

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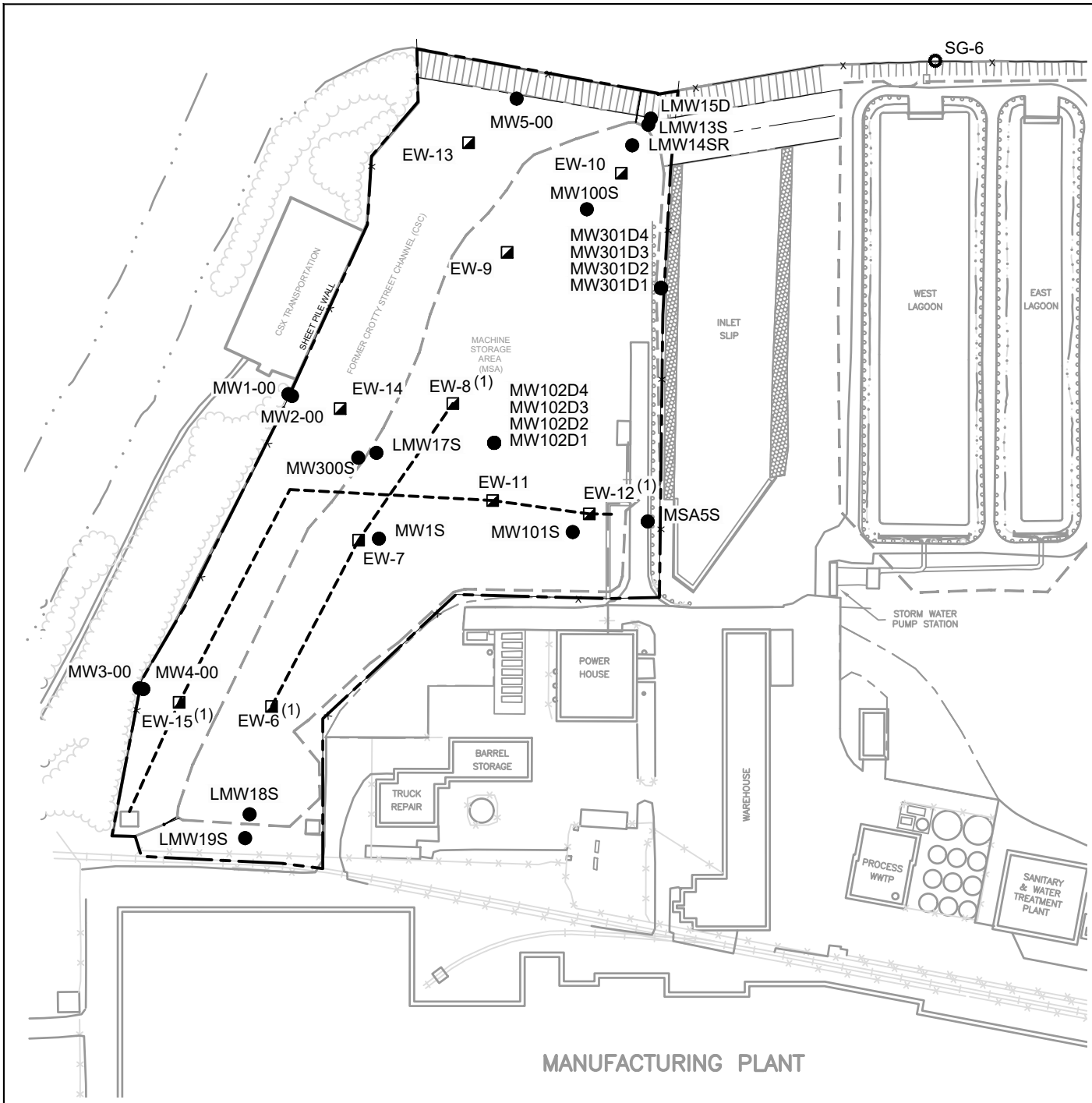

LEGEND

- FENCE
- GUARDRAIL
- RAILROAD
- TREELINE
- SHORELINE
- BARRIER (DEEP SOIL MIXING)
- SHEET PILE WALL
- APPROXIMATE RACER PROPERTY BOUNDARY
- EXTRACTION DISCHARGE LINE

MW403S ● MONITORING WELL LOCATION
EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION
SG-6 ○ STAFF GAGE LOCATION

NOTE:
(1) ACTIVE PUMPING LOCATION.

0 100 200 ft

N

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RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

Project No. **11208058**
Date **January 2022**

WATER ELEVATION MONITORING LOCATIONS

FIGURE 2

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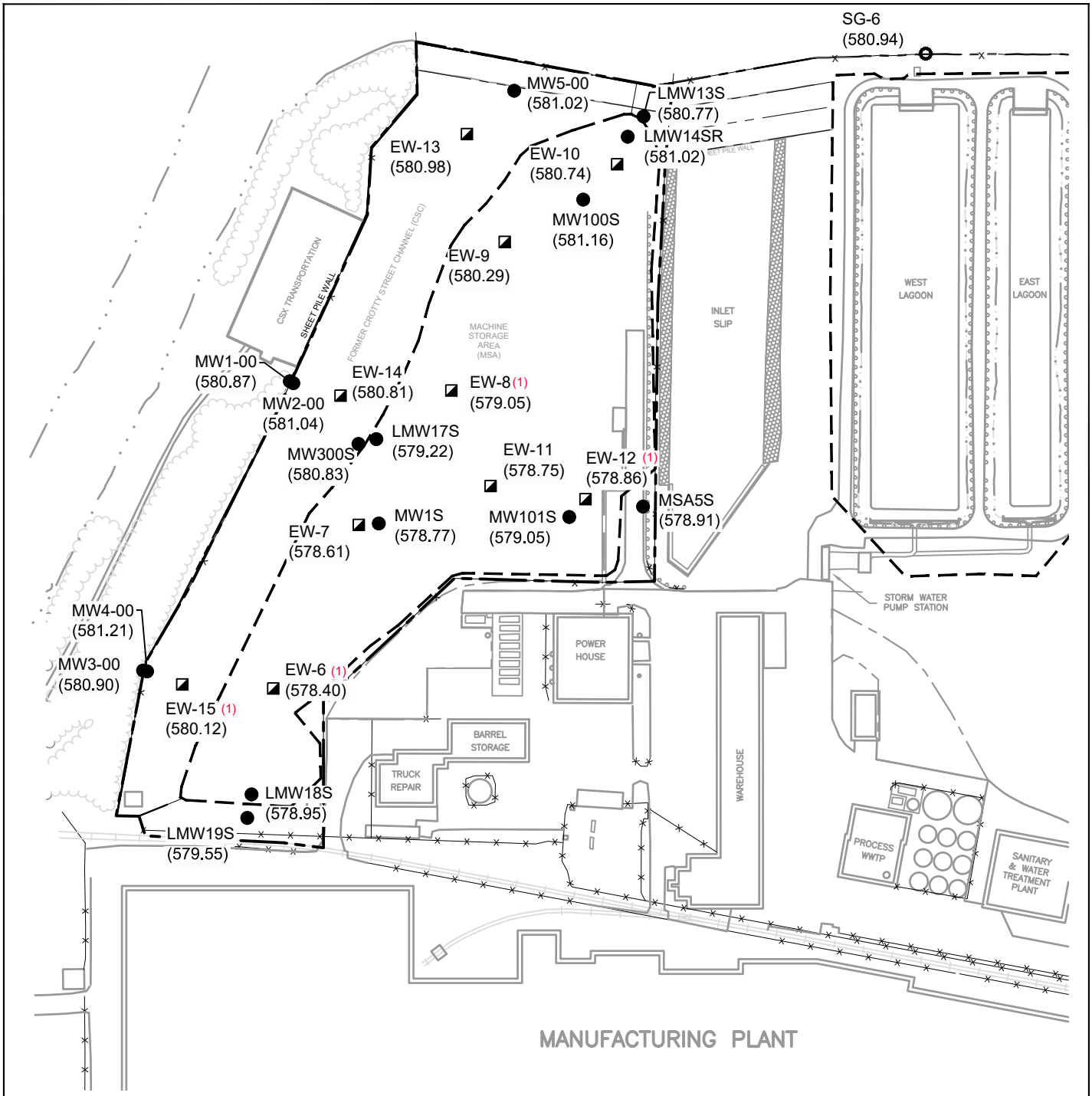

LEGEND

- FENCE
- GUARDRAIL
- RAILROAD
- TREELINE
- SHORELINE
- BARRIER (DEEP SOIL MIXING)
- SHEET PILE WALL
- APPROXIMATE RACER PROPERTY BOUNDARY

- MW403S ● MONITORING WELL LOCATION (WATER LEVELS MONITORED ANNUALLY)
- SG-1 ○ STAFF GAGE LOCATION
- EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION (WATER LEVELS MONITORED MONTHLY)
- (578.44) GROUNDWATER ELEVATION (ft. AMSL)
- (NM) NOT MEASURED
- (1) PUMP LOCATION

0 100 200 ft

N

GHD

RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

Project No. **11208058**
Date **January 2022**

SHALLOW GROUNDWATER ELEVATIONS AUGUST 20, 2021

FIGURE 3

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DATE: 08/29/94 DRAWING: 7900B216 ALL ELEVATIONS IN NAVD88

Tables

Table 1

Groundwater Extraction System Water Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Location	Reference Elevation	Bottom of Well Elevation (ft AMSL)	Top ICU Top ICU (ft AMSL)	Water Elevation (ft AMSL) Dec. 21, 2020	Water Elevation (ft AMSL) Feb. 22, 2021	Water Elevation (ft AMSL) Mar. 23, 2021	Water Elevation (ft AMSL) Apr. 29, 2021	Water Elevation (ft AMSL) May 27, 2021	Water Elevation (ft AMSL) Jun. 28, 2021	Water Elevation (ft AMSL) Jul. 30, 2021
Machine Storage Area										
EW-6	589.74	570.39	572.39	578.55	578.49 (1)	578.27 (1)	578.26 (1)	578.17 (1)	578.13 (1)	578.66 (1)
EW-7	587.99	571.14	571.64	578.6	578.6	578.6	578.6	578.52	578.5	578.50
EW-8	588.34	572.29	573.29	579.07	578.96	579.03	579.01 (1)	578.93	578.95	578.97
EW-9	588.04	572.19	573.69	580.45	580.33	580.05	580.11	579.96	580.03	580.2
EW-10	587.77	570.82	572.32	580.98	580.75	580.5	580.61	580.42	580.42	580.57
EW-11	591.51	571.91	572.56	578.84 (1)	578.88 (1)	578.87 (1)	578.86 (1)	578.82 (1)	578.71 (1)	578.72
EW-12	586.42	571.57	573.07	579.29	579.13 (1)	579.11 (1)	579.11	578.76 (1)	578.76 (1)	578.71 (1)
Crotty Street Channel Containment Area										
EW-13	584.33	571.86	NA	582.05	581.2	581.54	581.19	581.29	581.07	581.35
EW-14	582.42	569.92	NA	(2)	(2)	581.39	580.98	581.19	580.95	581.29
EW-15	583.71	571.61	NA	581.65	580.05	581.19	580.58	581.12	580.73	581.16
Saginaw River										
SG-6	587.16	NA	NA	581.34	NM	580.57	580.74	581.17	580.85	581.41

Notes:

ICU Intermediate Confining Unit
-- No Level recorded
-- Not applicable
(1) Product identified in well
(2) Water level above reference elevation
(3) Depth to water meter malfunction

Table 1

Groundwater Extraction System Water Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Location	Reference Elevation	Bottom of Well Elevation (ft AMSL)	Top ICU Top ICU (ft AMSL)	Water Elevation (ft AMSL) Aug. 20, 2021		Water Elevation (ft AMSL) Sept. 27, 2021		Water Elevation (ft AMSL) Oct. 27, 2021[3]
Machine Storage Area								
EW-6	589.74	570.39	572.39	578.40	(1)	578.33	(1)	NM
EW-7	587.99	571.14	571.64	578.61		578.56		NM
EW-8	588.34	572.29	573.29	579.05		579.01		NM
EW-9	588.04	572.19	573.69	580.29		580.2		NM
EW-10	587.77	570.82	572.32	580.74		580.54		NM
EW-11	591.51	571.91	572.56	578.75	(1)	578.85	(1)	NM
EW-12	586.42	571.57	573.07	578.86	(1)	578.93	(1)	NM
Crotty Street Channel Containment Area								
EW-13	584.33	571.86	NA	580.98		581.94		NM
EW-14	582.42	569.92	NA	580.81		(2)		NM
EW-15	583.71	571.61	NA	580.12		581.82		NM
Saginaw River								
SG-6	587.16	NA	NA	580.94		580.42		NM

Notes:

ICU Intermediate Confining Unit
-- No Level recorded
-- Not applicable
(1) Product identified in well
(2) Water level above reference elevation
(3) Depth to water meter malfunction

Table 2

Monitoring Well Completion Details And Groundwater Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL)										
							8/25/2021	8/3/2020	12/12/2019	12/19/2018	8/23/2017	12/8/2016	8/24/2015	8/6/2014	8/6/2013	8/7/2012	8/22/2011
Machine Storage Area (MSA)																	
LMW13S	589.40	19.22	10	SS	PVC	2	580.77	581.97	581.94	580.46	580.72	580.01	580.10	579.43	578.61	578.19	578.03
LMW17S	589.31	19.83	10	SS	PVC	2	579.22	579.90	579.42	579.13	579.17	578.79	579.13	578.96	578.87	578.85	578.80
LMW18S	592.33	22.52	10	SS	PVC	2	578.95	579.30	578.85	578.64	578.48	578.17	578.62	578.27	577.93	577.82	577.61
LMW19S	588.61	19.32	10	SS	PVC	2	579.55	580.45	580.13	579.10	578.99	578.91	579.55	579.32	578.44	578.58	578.34
MW1S	591.08	12.95	2	SS	SS	2	578.77	578.88	578.77	578.79	578.76	578.77	578.73	578.71	578.80	578.65	578.65
MW100S	591.97	14.44	10	SS	SS	2	581.16	581.95	581.12	580.58	580.69	579.80	580.19	579.32	578.81	578.49	578.18
MW101S	593.34	19.22	10	SS	SS	2	579.05	579.12	579.48	579.44	578.99	579.17	579.12	579.01	579.10	578.94	578.80
MW102D1	594.86	30.99	10	SS	SS	2	580.82	582.13	581.55	580.18	580.86	579.30	579.88	579.39	578.34	577.90	578.71
MW102D2	594.93	36.21	10	SS	SS	2	580.81	582.12	581.53	580.15	580.85	579.37	579.86	579.38	578.31	577.89	578.69
MW102D3	594.91	46.74	10	SS	SS	2	580.78	582.09	581.52	580.15	580.78	579.25	579.83	579.35	578.27	577.84	578.67
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	580.72	582.03	581.44	580.08	580.74	579.19	579.77	579.30	578.24	577.79	578.63
MW300S	587.12	15.06	10	SS	SS	2	580.83	582.00	581.36	580.86	579.97	577.19	577.90	577.03	577.17	577.69	577.03
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	581.02	582.13	581.28	580.54	580.69	579.63	580.02	579.22	578.55	578.14	577.47
Perimeter Banks (PB)																	
LMW15D	588.34	32..8	10	SS	PVC	2	580.89	582.33	581.63	580.16	580.93	579.16	579.68	579.37	578.02	577.56	578.65
MW301D1	589.54	27.50	10	SS	SS	2	579.16	580.48	579.88	578.51	579.24	577.60	578.15	577.70	576.56	578.38	579.39
MW301D2	589.16	37.24	10	SS	SS	2	579.24	580.59	579.97	578.56	579.31	577.67	578.22	577.78	576.62	577.99	579.00
MW301D3	589.22	44.04	10	SS	SS	2	579.10	580.46	579.82	578.43	579.17	577.53	578.06	577.64	576.46	577.87	578.87
MW301D4	589.33	55.95	10	SS	SS	2	579.20	580.56	579.92	578.52	579.25	577.61	578.14	577.96	576.54	578.15	579.16
Support Facilities Area (SFA)																	
MSA5S	588.60	18.98			SS	2	578.91	n/a	n/a	588.60	579.97	579.91	580.26	579.67	580.22	578.58	578.67
Crotty Street Channel																	
MW1-00	588.26	12.00	7	SS	SS	2	580.87	582.09	582.09	580.55	579.67	579.16	579.79	579.35	577.71	576.44	577.17
MW2-00	589.29	18.00	7	SS	SS	2	581.04	582.22	582.22	580.65	581.58	578.84	579.35	578.75	577.79	576.62	577.29
MW3-00	588.40	12.50	7	SS	SS	2	580.90	582.10	582.10	580.48	580.60	579.15	579.76	579.38	577.67	576.47	577.25
MW4-00	589.65	19.00	7	SS	SS	2	581.21	582.38	582.38	580.81	580.87	579.03	579.54	578.91	577.90	576.76	577.41
MW5-00	588.89	13.00	7	SS	SS	2	581.33	582.53	582.53	581.31	580.15	577.22	577.70	576.99	577.00	576.73	576.77
SG-1	580.00	- -	- -	- -	- -	- -	n/a	n/a	n/a	n/a	n/a	n/a	n/a	581.06	n/a	n/a	n/a
Saginaw River Elevation [6]							580.94	582.44	581.48	580.05	580.79	579.07	579.66	579.32	577.02	576.71	577.53

Notes:

(1) Approximate value
(2) Lock Needs Replacing
(3) Gage needs to be relocated
(4) Could not open due to liner attachment
(5) Could not read due to accumulation of snow and ice
(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to 2018, and measured at the sheet pile wall (SG-6) from 2018 to present.
(7) Could not read due to well being covered with equipment
n/a Water elevation not available

Table 2

Monitoring Well Completion Details And Groundwater Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL) 8/16/2010	8/27/2009	8/19/2008	8/20/2007	8/16/2006	8/29/2005	8/24/2004	7/28/2003	8/26/2002	8/13/2001	3/19/2001	2/23/2001
Machine Storage Area (MSA)																		
LMW13S	589.40	19.22	10	SS	PVC	2	578.71	579.31	578.21	577.67	578.23	578.14	579.40	578.45	582.05	578.68	577.85	578.17
LMW17S	589.31	19.83	10	SS	PVC	2	578.83	578.81	578.58	577.58	578.63	578.31	578.80	582.73	578.91	578.68	578.74	578.83
LMW18S	592.33	22.52	10	SS	PVC	2	577.66	577.99	577.62	578.13	578.00	578.23	578.45	578.35	578.85	578.10	578.22	578.61
LMW19S	588.61	19.32	10	SS	PVC	2	578.25	578.53	578.45	579.71	578.45	578.85	579.21	579.24	579.93	578.79	579.56	579.96
MW1S	591.08	12.95	2	SS	SS	2	578.68	579.71	580.93	578.48	n/a	577.58	578.63	578.56	578.48	578.51	578.41	(5)
MW100S	591.97	14.44	10	SS	SS	2	578.86	579.27	578.40	578.01	578.38	578.57	579.15	577.27	578.91	578.93	578.36	578.64
MW101S	593.34	19.22	10	SS	SS	2	578.93	578.78	578.49	578.39	578.31	577.95	578.82	578.87	579.12	578.76	578.84	578.96
MW102D1	594.86	30.99	10	SS	SS	2	578.39	579.42	578.83	578.04	578.30	578.30	579.02	578.25	578.98	578.18	577.61	577.40
MW102D2	594.93	36.21	10	SS	SS	2	578.37	579.40	578.93	578.03	578.25	578.33	579.01	578.24	578.95	578.15	577.60	577.39
MW102D3	594.91	46.74	10	SS	SS	2	579.34	579.41	578.89	577.98	578.25	578.31	578.98	578.20	578.93	578.11	577.56	577.34
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	578.29	579.33	578.76	577.98	578.22	578.25	578.94	578.16	578.86	578.03	577.49	577.27
MW300S	587.12	15.06	10	SS	SS	2	577.18	578.22	579.26	576.30	576.81	578.34	577.05	577.77	578.53	577.00	578.84	578.67
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	578.60	579.19	577.96	576.98	577.97	577.50	576.94	578.13	578.45	578.23	577.38	577.77
Perimeter Banks (PB)																		
LMW15D	588.34	32..8	10	SS	PVC	2	578.21	579.45	578.12	577.89	578.22	578.24	579.34	578.04	578.83	578.06	577.37	577.12
MW301D1	589.54	27.50	10	SS	SS	2	578.96	579.96	579.03	578.72	578.94	579.05	580.02	578.90	579.66	578.89	578.28	578.03
MW301D2	589.16	37.24	10	SS	SS	2	578.60	579.56	578.64	578.33	578.55	578.62	579.59	578.49	579.25	578.48	577.86	577.62
MW301D3	589.22	44.04	10	SS	SS	2	578.47	579.44	578.41	578.20	578.44	578.52	579.47	578.36	579.10	578.53	577.72	577.59
MW301D4	589.33	55.95	10	SS	SS	2	578.74	579.70	578.75	578.48	578.69	578.80	579.71	578.57	579.28	578.48	577.86	577.63
Support Facilities Area (SFA)																		
MSA5S	588.60	18.98			SS	2	579.10	580.10	578.04	580.10	579.28	579.76	580.57	580.55	580.65	579.74	580.65	580.42
Crotty Street Channel																		
MW1-00	588.26	12.00	7	SS	SS	2	577.13	578.95	578.74	577.11	576.92	577.09	578.37	577.78	578.44	576.72	578.61	578.14
MW2-00	589.29	18.00	7	SS	SS	2	577.26	578.40	578.83	577.09	576.97	577.23	577.50	577.60	578.03	576.76	578.69	578.26
MW3-00	588.40	12.50	7	SS	SS	2	577.14	579.01	578.74	577.19	576.94	577.13	578.51	577.77	578.38	576.70	578.62	578.26
MW4-00	589.65	19.00	7	SS	SS	2	577.38	578.55	578.95	577.21	577.07	577.34	577.59	577.68	578.07	576.79	578.67	578.30
MW5-00	588.89	13.00	7	SS	SS	2	576.95	578.04	578.82	576.55	576.72	577.85	576.91	576.28	576.72	577.02	577.06	577.86
SG-1	580.00	- -	- -	- -	- -	- -	n/a	n/a	578.55	577.83	578.33	578.43	579.63	577.93	578.73	578.12	(5)	(5)
Saginaw River Elevation [6]							577.41	578.34	577.97	577.09	577.41	578.32	578.52	576.83	578.50	577.91	576.80	576.74

Notes:

(1) Approximate value
(2) Lock Needs Replacing
(3) Gage needs to be relocated
(4) Could not open due to liner attachment
(5) Could not read due to accumulation of snow and ice
(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to 2018, and measured at the sheet pile wall (SG-6) from 2018 to present.
(7) Could not read due to well being covered with equipment
n/a Water elevation not available

Table 2

Monitoring Well Completion Details And Groundwater Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL) 1/24/2001	12/15/2000	11/30/2000	10/31/2000	9/11/2000	8/29/2000	7/18/2000	6/30/2000	5/30/2000	4/26/2000	3/29/2000	2/28/2000	2/2/2000
Machine Storage Area (MSA)																			
LMW13S	589.40	19.22	10	SS	PVC	2	578.19	578.06	578.35	578.63	578.90	578.90	580.11	580.62	581.63	581.81	581.27	581.74	579.27
LMW17S	589.31	19.83	10	SS	PVC	2	579.06	578.79	579.17	578.93	579.24	579.20	579.09	579.85	580.06	580.19	579.91	579.96	579.08
LMW18S	592.33	22.52	10	SS	PVC	2	578.39	578.18	578.29	578.52	578.67	579.03	578.52	577.80	578.10	578.09	577.66	577.80	577.09
LMW19S	588.61	19.32	10	SS	PVC	2	579.59	(5)	579.56	579.38	579.34	580.13	579.45	580.56	580.96	581.25	580.73	581.39	579.70
MW1S	591.08	12.95	2	SS	SS	2	578.44	578.36	578.40	578.57	578.43	578.38	578.34	579.31	579.26	579.29	579.28	579.18	579.05
MW100S	591.97	14.44	10	SS	SS	2	578.87	578.65	579.05	579.33	579.57	579.66	579.85	578.03	577.79	577.07	576.87	576.69	577.09
MW101S	593.34	19.22	10	SS	SS	2	579.18	578.84	579.03	578.91	578.99	579.04	579.02	580.22	580.39	580.14	579.21	579.86	579.61
MW102D1	594.86	30.99	10	SS	SS	2	577.47	577.62	577.67	577.87	578.16	578.15	578.71	577.62	577.70	577.60	577.25	577.23	576.81
MW102D2	594.93	36.21	10	SS	SS	2	577.45	577.61	577.65	577.85	578.13	578.13	578.67	577.48	577.58	577.44	577.12	577.08	576.80
MW102D3	594.91	46.74	10	SS	SS	2	577.40	577.56	577.60	577.80	578.08	578.09	578.63	577.52	577.59	577.47	577.16	577.12	576.88
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	577.33	577.47	577.53	577.73	578.00	578.02	578.55	577.38	577.45	577.34	577.01	576.98	575.70
MW300S	587.12	15.06	10	SS	SS	2	578.99	578.07	578.84	578.27	578.16	578.24	n/a (2)	n/a (4)	579.89	580.18	579.73	No Access	578.55
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	577.88	577.54	578.04	578.13	578.16	578.21	579.19	579.32	579.22	578.91	578.99	578.55	578.58
Perimeter Banks (PB)																			
LMW15D	588.34	32..8	10	SS	PVC	2	577.22	577.33	577.48	577.63	577.94	578.03	578.43	n/a (4)	578.88	578.74	578.56	578.56	578.23
MW301D1	589.54	27.50	10	SS	SS	2	578.09	578.25	578.34	(5)	(5)	578.88	578.65	579.37	578.80	578.85	578.59	578.56	578.28
MW301D2	589.16	37.24	10	SS	SS	2	577.67	577.81	577.92	(5)	(5)	578.47	578.56	578.80	578.89	578.77	578.54	578.51	578.22
MW301D3	589.22	44.04	10	SS	SS	2	577.52	577.67	577.78	(5)	(5)	578.32	578.56	578.80	578.85	578.74	578.49	578.48	578.18
MW301D4	589.33	55.95	10	SS	SS	2	577.68	577.82	577.93	(5)	(5)	578.48	578.48	578.78	578.76	578.69	578.45	578.43	578.14
Support Facilities Area (SFA)																			
MSA5S	588.60	18.98			SS	2	580.62	580.46	580.65	580.34	580.56	580.41	581.32	581.17	582.22	582.37	580.62	582.13	580.96
Crotty Street Channel																			
MW1-00	588.26	12.00	7	SS	SS	2	577.81	577.49	577.75	577.45	577.36	577.60	577.71	579.57	578.68	578.42	578.04	578.89	577.89
MW2-00	589.29	18.00	7	SS	SS	2	577.82	577.51	577.77	577.45	577.36	577.59	577.65	578.67	Not Accessible	577.65	577.26	578.11	579.11
MW3-00	588.40	12.50	7	SS	SS	2	577.79	577.48	577.74	577.45	577.37	577.60	578.68	578.46	579.05	578.79	578.40	579.25	578.27
MW4-00	589.65	19.00	7	SS	SS	2	577.84	577.51	577.78	577.47	577.34	577.57	577.62	578.87	Not Accessible	577.60	577.18	578.03	577.03
MW5-00	588.89	13.00	7	SS	SS	2	576.97	576.91	576.90	577.31	577.91	578.01	n/a (4)	n/a (4)	579.12	578.86	578.66	578.36	577.63
SG-1	580.00	- -	- -	- -	- -	- -	(5)	(5)	577.33	577.43	577.93	578.05	Destroyed (3)	Destroyed (3)	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation [6]							576.77	576.78	577.02	577.23	577.49	577.76	578.27	577.81	577.48	577.42	577.37	577.24	577.14

Notes:

(1) Approximate value
(2) Lock Needs Replacing
(3) Gage needs to be relocated
(4) Could not open due to liner attachment
(5) Could not read due to accumulation of snow and ice
(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to 2018, and measured at the sheet pile wall (SG-6) from 2018 to present.
(7) Could not read due to well being covered with equipment
n/a Water elevation not available

Table 2

Monitoring Well Completion Details And Groundwater Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL)										
							1/4/2000	11/24/1999	10/25/1999	9/27/1999	9/7/1999	7/20/1999	6/22/1999	5/20/1999	4/20/1999	3/19/1999	3/8/1999
Machine Storage Area (MSA)																	
LMW13S	589.40	19.22	10	SS	PVC	2	580.08	580.68	581.26	580.55	580.02	579.68	579.23	581.42	582.65	583.17	582.56
LMW17S	589.31	19.83	10	SS	PVC	2	579.47	579.71	579.69	578.98	579.19	579.43	579.65	579.77	580.25	581.57	581.58
LMW18S	592.33	22.52	10	SS	PVC	2	577.37	577.32	577.62	577.51	577.89	579.57	579.45	579.39	579.78	579.44	579.44
LMW19S	588.61	19.32	10	SS	PVC	2	580.30	579.58	579.95	579.53	580.01	580.42	580.52	580.51	580.94	580.90	580.66
MW1S	591.08	12.95	2	SS	SS	2	579.07	579.15	579.11	578.51	578.58	--	578.64	579.29	579.49	584.35	584.12
MW100S	591.97	14.44	10	SS	SS	2	577.49	578.09	578.77	578.57	--	579.33	579.07	579.30	579.96	582.53	582.71
MW101S	593.34	19.22	10	SS	SS	2	579.61	579.65	579.81	579.04	579.18	578.83	578.71	579.19	580.44	586.50	586.44
MW102D1	594.86	30.99	10	SS	SS	2	576.80	576.38	577.47	577.64	578.29	579.69	576.82	579.27	579.34	582.38	582.32
MW102D2	594.93	36.21	10	SS	SS	2	576.67	576.24	577.33	577.50	578.15	579.68	576.78	579.34	579.39	582.03	581.93
MW102D3	594.91	46.74	10	SS	SS	2	576.71	576.26	577.35	577.55	578.20	579.66	576.80	579.25	579.35	581.92	581.84
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	576.56	576.12	577.21	577.40	578.05	579.56	576.70	579.13	579.21	581.54	581.45
MW300S	587.12	15.06	10	SS	SS	2	579.27	579.91	578.87	578.90	579.33	579.69	579.95	579.51	579.86	579.37	579.51
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	Damaged	Damaged	578.58	578.30	578.88	579.97	578.55	580.40	581.12	582.10	582.11
Perimeter Banks (PB)																	
LMW15D	588.34	32..8	10	SS	PVC	2	577.95	577.18	578.49	578.93	579.81	579.68	577.88	579.21	579.23	579.86	579.71
MW301D1	589.54	27.50	10	SS	SS	2	578.05	577.42	578.63	578.99	579.67	579.73	575.75	579.22	579.32	579.40	579.29
MW301D2	589.16	37.24	10	SS	SS	2	577.99	577.35	578.57	578.93	579.62	579.69	576.11	579.19	579.28	579.35	579.23
MW301D3	589.22	44.04	10	SS	SS	2	577.96	577.32	578.54	578.90	579.59	579.65	576.13	579.18	579.25	579.38	579.23
MW301D4	589.33	55.95	10	SS	SS	2	577.90	577.27	578.47	578.85	579.52	579.62	576.08	579.17	579.26	579.37	579.18
Support Facilities Area (SFA)																	
MSA5S	588.60	18.98			SS	2	581.42	581.70	581.77	581.74	581.84	579.38	577.24	579.71	580.83	580.33	580.54
Crotty Street Channel																	
MW1-00	588.26	12.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW2-00	589.29	18.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW3-00	588.40	12.50	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW4-00	589.65	19.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW5-00	588.89	13.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SG-1	580.00	- -	- -	- -	- -	- -	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation [6]							577.15	576.54	577.35	578.04	578.59	578.87	578.51	578.37	578.32	578.55	578.34

Notes:

(1) Approximate value
(2) Lock Needs Replacing
(3) Gage needs to be relocated
(4) Could not open due to liner attachment
(5) Could not read due to accumulation of snow and ice
(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to 2018, and measured at the sheet pile wall (SG-6) from 2018 to present.
(7) Could not read due to well being covered with equipment
n/a Water elevation not available

Table 3

Analytical Results Summary
Groundwater Treatment System Effluent Sampling
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Sample Location:			**effluent-GWTS**	**effluent-GWTS**
Sample ID:			**W-11208058-121020-SSH-2012**	**W-11208058-062321-SSH-10121**
Sample Date:			**12/10/2020**	**6/23/21**
Parameters	**Units**	**Daily Maximum[(1)]**		
VOAs				
Vinyl chloride	mg/L	0.002	0.001 U	0.001 U
Metals				
Cadmium	mg/L	0.057	0.0002 J	0.013
Chromium	mg/L	6.812	0.005 U	0.005 U
Copper	mg/L	1.476	0.02 U	0.008 J
Iron	mg/L	--	0.057 J	0.1 U
Lead	mg/L	0.632	0.003 U	0.003 U
Mercury	mg/L	ND	0.0002 U	0.0002 U
Nickel	mg/L	2.548	0.0026 J	0.0057 J
Silver	mg/L	0.2	0.005 U	0.005 U
Pesticides				
Aroclor-1016 (PCB-1016)	mg/L	ND	0.000095 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	ND	0.000095 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	ND	0.000095 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	ND	0.000095 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	ND	0.000095 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	ND	0.000095 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	ND	0.000095 U	0.000096 U
Wet				
Ammonia	mg/L	30	0.32	3.8
Biochemical oxygen demand (BOD)	mg/L	835	2.0 U	2.0 U
Chemical oxygen demand (COD)	mg/L	1670	10 U	10
Oil and grease (HEM), polar	mg/L	100	4.8 U	4.0 U
pH, lab	s.u.	6.5 to 11.0	8.1 HF	8.1 HF
Phosphorus	mg/L	13.8	0.10 U	0.14
Total suspended solids (TSS)	mg/L	1336	4.0 U	4.0 U

Notes:

HF Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U Not detected at the associated reporting limit.
(1) Bay City Industrial User Discharge Permit (120807)

Table 4

Analytical Results Summary
Extraction System Sampling
Racer Trust - Bay City Industrial Land
Bay City, Michigan

AOI:			**Treatment System**	**Treatment System**
Sample Location:			**influent-GWTS**	**influent-GWTS**
Sample ID:			**GW-11208058-032321-SSH-01021**	**GW-11208058-082721-SSH-21108**
Sample Date:			**03/23/2021**	**08/27/2021**
Parameters:	**Units**	**Michigan Residential Drinking water criteria[1]**		
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00049 U	0.00097 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00049 U	0.00097 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00049 U	0.00097 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	**0.0033**	**0.011**
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00049 U	0.00097 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00049 U	0.00097 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00049 U	0.00097 U

Notes:

J Estimated concentration
U Not present at or above the associated value
1.0 Exceedance of criteria
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2013

Table 5

Analytical Results Summary
Annual Sampling
Racer Trust - Bay City Industrial Land
Bay City, Michigan

AOI:			Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:			MW102D1	MW102D2	MW102D4	MW300S
Sample ID:			GW-11208058-082721-SSH-21107	GW-11208058-082721-SSH-21106	GW-11208058-082721-SSH-21105	GW-11208058-082321-SSH-21104
Sample Date:			08/27/2021	08/27/2021	08/27/2021	08/23/2021
Parameters:	**Units**	**Michigan Residential Drinking water criteria[1]**				
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.000095 U	0.000098 U	0.000097 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.000095 U	0.000098 U	0.000097 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.000095 U	0.000098 U	0.000097 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00027	0.000098 U	0.000097 U	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.000095 U	0.000098 U	0.000097 U	0.000086 J
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.000095 U	0.000098 U	0.000097 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.000095 U	0.000098 U	0.000097 U	0.000097 U

Notes:

J Estimated concentration.
U Not present at or above the associated value.
1.0 Exceedance of criteria
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2013

Table 5

Analytical Results Summary
Annual Sampling
Racer Trust - Bay City Industrial Land
Bay City, Michigan

AOI:			Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:			LMW13S	LMW13S	LMW15D	MW301D2
Sample ID:			GW-11208058-082321-SSH-21101	GW-11208058-082321-SSH-21102	GW-11208058-082321-SSH-21100	GW-11208058-082321-SSH-21103
Sample Date:			08/23/2021	08/23/2021 (Duplicate)	08/23/2021	08/23/2021
Parameters:	**Units**	**Michigan Residential Drinking water criteria[1]**				
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	**0.0015**	**0.0015**	0.000095 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.000095 U	0.000095 U	0.000095 U	0.000096 U

Notes:

J Estimated concentration.
U Not present at or above the associated value.
1.0 Exceedance of criteria
(1) Michigan Part 201 Generic Cleanup Criteria and Screening L

Table 6

Summary of Long-Term Groundwater and Stormwater Monitoring Activities
Racer Trust - Bay City Site
Bay City, Michigan

		Original Program (1) 2001 - 2010			Revised 2011 - 2014			Revised 2015-2016			Revised 2017-2021		
		Groundwater Quality Monitoring		Static Water Level Monitoring (2)	Groundwater Quality Monitoring		Static Water Level Monitoring (2)	Groundwater Quality Monitoring		Static Water Level Monitoring (2)	Groundwater Quality Monitoring		Static Water Level Monitoring (2)
Plant Area	**Location**	**Parameters**	**Frequency**	**Frequency**	**Parameters**	**Frequency**	**Frequency**	**Parameters**	**Frequency**	**Frequency**	**Parameters**	**Frequency**	**Frequency**
Machine Storage Area (MSA)													
MSA	LMW17S	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	LMW18S (4)	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	LMW19S	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	MW1S (4)	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	MW100S (4)	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	MW101S (4)	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	MW102D1	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
MSA	MW102D2	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
MSA	MW102D3	PCBs	annually	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
MSA	MW102D4	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
MSA	MW300S	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
MSA	LMW14S	--	--	annually	--	--	annually	--	--	annually	--	--	annually
Perimeter Banks (PB)													
PB	LMW13S	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
PB	LMW15D	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
PB	MW301D1	PCBs	annually	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
PB	MW301D2	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
PB	MW301D3	PCBs	annually	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
PB	MW301D4	PCBs	annually	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
Crotty Street Channel (CSC)													
CSC	MW1	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
CSC	MW2	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
CSC	MW3	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
CSC	MW4	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
CSC	MW5	- -	- -	annually	- -	- -	annually	- -	- -	annually	- -	- -	annually
CSC	SG-1 (3) (7)	- -	- -	annually	- -	- -	annually	- -	- -	--	- -	- -	--
Stormwater System(3)													
MSA(5)	Extraction System	PCBs	Semi-annually	- -	PCBs	Semi-annually	- -	PCBs	Semi-annually	- -	- -	- -	- -
CSC(5)	Extraction System	PCBs	Semi-annually	- -	PCBs	Semi-annually	- -	PCBs	Semi-annually	- -	- -	- -	- -
CSC(5)	CB2	PCBs	Semi-annually	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Treatment System	Influent							- -	- -	- -	PCBs	Semi-annually	- -
Treatment System	Effluent							(6)	Semi-annually	- -	(6)	Semi-annually	- -

Notes:

(1) The program presented is a subset of the original program. Locations no longer included in this long-term groundwater and stormwater monitoring program are not presented.
(2) Static water level monitoring refers to independent monitoring program to evaluate containment. Static water level measurements will also be collected at all groundwater quality monitoring wells to evaluate groundwater flow directions.
(3) Staff gauge.
(4) Extraction system monitoring.
(5) To be sampled by company who maintains the extraction system.
(6) Sampling in accordance with the Industrial User Discharge Permit with the City of Bay City (120807). Parameters include: TSS, pH, grease/oil, phosphorous, COD, BOD, cadmium,
(7) SG-1 is damaged, and Saginaw River levels are now measured from SG-6, located at the General Motors Site.

Attachments

Attachment A

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 12/21/2020

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: cloudy, wind 3-5mph

Temperature: mid 30s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	appears OK
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile wall
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at wld's on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.19	off 60% to full ASH	Y	
EW-8	11.34	9.27	off	Y	
EW-12	9.42	7.13	off	Y	
EW-15	6.71	2.06	60%	Y	full speed on VFD
EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13 EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33 5.42
DTW	9.39	7.59	6.79	12.67 (LNAPL)	2.28 flooded

4. GROUNDWATER TREATMENT SYSTEM

	Comments		Comments
[X] Check piping for leaks	none	[X] check feed pump	sump
[X] Check Bag filters	OK	Flow Reading	2.7 (gpm)
[X] check GACs for leaks	none	Totalized Flow Reading	308,935 (gal)
[X] Check PLC	OK	[X] heater on?	yes
[X] check aerator	OK 4.5 psi	[X] check sludge tank	
[X] check sludge pump	unoperational	sludge thickness	2-3 (in)
[X] check inspection drum	some Fe+ bacteria		
[X] check aeration tank	OK		
[X] check settling chamber	some Fe+ bactwia		
[X] check clear well	OK		
[X] check floats in clearwell	OK		

Collect Samples

		Date	Initials	Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-				
[ ] Sample Groundwater Treatment System effluent	W-12610-				

Notes

EW6 + EW12 also had LNAPL

TOC 587.16 - 5.82 = 581.34

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 2/22/21

Completed By: SH

1. DETAILS OF INSPECTION

- [x] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: light snow, wind 10

Temperature: 35°F

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
y	Exposure Barrier (signs of trespassing, impairment of pavement)	not at this time
y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion by sheetpile wall
y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.25	N	y	drops of LNAPL on probe
EW-8	11.34	9.38	N	y	
EW-12	9.42	7.29	N	y	LNAPL
EW-15	6.71	3.66	y - 57.5%	y	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.39	7.71	7.02	12.63 (LNAPL)	3.13	at floor level

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[x] Check piping for leaks	none
[x] Check Bag filters	pressure OK
[x] check GACs for leaks	none
[x] Check PLC	OK
[x] check aerator	OK
[x] check sludge pump	not working
[x] check inspection drum	Fe+ bacteria foam
[x] check aeration tank	OK
[x] check settling chamber	some Fe+ bacteria
[x] check clear well	OK
[x] check floats in clearwell	OK

	Comments
[x] check feed pump	sump
Flow Reading	2.3 (gpm)
Totalized Flow Reading	348,776 (gal)
[x] heater on?	yes
[x] check sludge tank	
sludge thickness	2-3 (in)

Collect Samples

	Date Initials	Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent		W-12610-	
[ ] Sample Groundwater Treatment System effluent		W-12610-	

Notes

no flow reading due to snow/ice

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 3/23/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: cloudy, wind ~ 5-10

Temperature: high 50s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	appears OK
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile wall
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.47	N	Y	LNAPL
EW-8	11.34	9.31	N	Y	
EW-12	9.42	7.31	N	Y	LNAPL
EW-15	6.71	2.52	4-57.5%	Y	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.39	7.99	7.27	12.64 (LNAPL)	2.79	1.03

4. GROUNDWATER TREATMENT SYSTEM

	Comments		Comments
[X] Check piping for leaks	none	[X] check feed pump	Sump
[X] Check Bag filters	OK	Flow Reading	2.2 (gpm)
[X] check GACs for leaks	none	Totalized Flow Reading	371,797 (gal)
[X] Check PLC	OK	[X] heater on?	yes
[X] check aerator	OK	[X] check sludge tank	
[X] check sludge pump	unoperational	sludge thickness	2-3 (in)
[X] check inspection drum	some fe+ bacteria		
[X] check aeration tank	OK		
[X] check settling chamber	some fe+ bacteria		
[X] check clear well	OK		
[X] check floats in clearwell	OK		

Collect Samples

	Date Initials Sample Numbe	Time 1300
[X] Sample Groundwater Treatment System Influent	~~GW-12610-~~ 11208058-032321-SSH-10021	
[ ] Sample Groundwater Treatment System effluent	~~GW-12610-~~ SSH semi-annual for PCBs	

Notes

RIVD 587.16 - 6.59 = 580.57

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 4/29/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [X] Other task: change out bag filters

Weather: cloudy, light rain

Temperature: mid 40s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	OK
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile
Y	Containment System (signs of deterioration of sheet pile, leaking)	Minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.48	N	N	LNAPL
EW-8	11.34	9.33	N	N	LNAPL
EW-12	9.42	7.31	N	N	
EW-15	6.71	3.13	57.5%	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.39	7.93	7.16	12.65 (LNAPL)	3.14	1.44

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	none
[X] Check Bag filters	changed
[X] check GACs for leaks	none
[X] Check PLC	OK
[X] check aerator	OK
[X] check sludge pump	unoperational
[X] check inspection drum	some Fe+ bacteria
[X] check aeration tank	OK
[X] check settling chamber	some Fe+ bacteria
[X] check clear well	OK
[X] check floats in clearwell	OK

	Comments
[X] check feed pump	Sump
Flow Reading	2.0 (gpm)
Totalized Flow Reading	397 390 (gal)
[X] heater on?	NO
[X] check sludge tank	2-3"
sludge thickness	(in)

Collect Samples

	Date	Initials	Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent			W-12610-	
[ ] Sample Groundwater Treatment System effluent			W-12610-	

Notes

4/5 - replace tubing on EW15

river 587.16 - 6.42 = 580.74

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 5/27/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [X] Response to Alarm (list type and/or PLC outputs) high Feed tank
- [ ] Other task:

Weather: cloudy, wind 10-15

Temperature: 50s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
X	Exposure Barrier (signs of trespassing, impairment of pavement)	appears OK
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheet pile
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.57	N	N	LNAPL
EW-8	11.34	9.41	N	N	
EW-12	9.42	7.66	N	N	LNAPL
EW-15	6.71	2.59	Y 57.5%	N	tubing on 5/24

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.47	8.08	7.35	12.69 (LNAPL)	3.04	1.23

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	none
[X] Check Bag filters	OK
[X] check GACs for leaks	none
[X] Check PLC	OK
[X] check aerator	OK
[X] check sludge pump	unoperational
[X] check inspection drum	Fet bacteria
[X] check aeration tank	clean diffusers
[X] check settling chamber	some fet bacteria
[X] check clear well	OK
[X] check floats in clearwell	OK

	Comments
[X] check feed pump	sump
Flow Reading	2.7 (gpm)
Totalized Flow Reading	400,420 (gal)
[X] heater on?	no
[X] check sludge tank	3"
sludge thickness	(in)

Collect Samples

	Date	Initials	Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent			W-12610-	
[ ] Sample Groundwater Treatment System effluent			W-12610-	

Notes

5/24/21 - take stage 1 GAC out of service - place stage 2 as 1 and install new GAC as stage 2

5/25 - backwash both GACs

river 587.16 - 5.99 = 581.17

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 6/28/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: mid 70s, part sun, wind ≈ 5

Temperature:

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
X	Exposure Barrier (signs of trespassing, impairment of pavement)	none identified
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at wells on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.61	N	N	LNAPL
EW-8	11.34	9.39	N	N	
EW-12	9.42	7.66	N	N	LNAPL
EW-15	6.71	2.98	Y-57.5%	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.49	8.01	7.35	12.80 (LNAPL)	3.26	1.47

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	none
[X] Check Bag filters	OK
[X] check GACs for leaks	none
[X] Check PLC	OK
[X] check aerator	OK
[X] check sludge pump	unoperational
[X] check inspection drum	Fe+ bacteria
[X] check aeration tank	OK
[X] check settling chamber	some Fe+ bacteria
[X] check clear well	OK
[X] check floats in clearwell	OK

	Comments
[X] check feed pump	sump
Flow Reading	2.5 (gpm)
Totalized Flow Reading	411,135 (gal)
[X] heater on?	No
[X] check sludge tank	
sludge thickness	≈ 3" (in)

Collect Samples

	Date Initials Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-	
[ ] Sample Groundwater Treatment System effluent	W-12610-	

Notes

from sheetpile cap to MW — 6.31'

— 587.16 − 6.31 = 580.85

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 7/30/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: mostly sun, wind ~15

Temperature: 70s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	appears OK
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.08	N	N	drops of LNAPL on probe
EW-8	11.34	9.37	N	N	
EW-12	9.42	7.71		N	LNAPL (thick)
EW-15	6.71	2.55	Y-57.5%	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.49	7.84	7.20	12.79	2.98	1.13

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	OK
[X] Check Bag filters	OK
[X] check GACs for leaks	OK
[X] Check PLC	OK
[X] check aerator	OK
[X] check sludge pump	unoperational
[X] check inspection drum	orange H2O
[X] check aeration tank	OK
[X] check settling chamber	OK
[X] check clear well	OK
[X] check floats in clearwell	OK

	Comments
[X] check feed pump	
Flow Reading	2.6 (gpm)
Totalized Flow Reading	421,003 (gal)
[X] heater on?	NO
[X] check sludge tank	
sludge thickness	3" (in)

Collect Samples

	Date Initials Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-	
[ ] Sample Groundwater Treatment System effluent	W-12610-	

Notes

Some animal signs causing erosion

TOC 587.16 − 5.75 = 581.41

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 8/20/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: part sun / clouds

Temperature: 80s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	none identified
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheet pile
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at wells on cap

3. GROUNDWATER EXTRACTION SYSTEM

N Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.34	N	N	LNAPL
EW-8	11.34	9.29	N	N	
EW-12	9.42	7.56	N	N	LNAPL
EW-15	6.71	3.59	Y	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.38	7.75	7.03	12.76 (LNAPL)	3.35	1.61

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	None
[X] Check Bag filters	OK
[X] check GACs for leaks	none
[X] Check PLC	OK
[X] check aerator	OK – 4.5 psi
[X] check sludge pump	unoperational
[X] check inspection drum	Fe+ bacteria
[X] check aeration tank	OK
[X] check settling chamber	OK
[X] check clear well	OK
[X] check floats in clearwell	OK

	Comments
[X] check feed pump	
Flow Reading	2.4 (gpm)
Totalized Flow Reading	436,078 (gal)
[X] heater on?	NO
[X] check sludge tank	
sludge thickness	3" (in)

Collect Samples

	Date Initials Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-	
[ ] Sample Groundwater Treatment System effluent	W-12610-	

Notes

river 587.16 – 6.22 = 580.94

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 9/27/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [X] Response to Alarm (list type and/or PLC outputs) high GAC alarm
- [ ] Other task:

Weather: mostly sun, windy

Temperature: 60s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	no impairment identified
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

N Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74	11.41	N	N	LNAPL
EW-8	11.34	9.33	N	N	
EW-12	9.42	7.49	N	N	LNAPL
EW-15	6.71	1.89	Y	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.43	7.84	7.23	12.66 (LNAPL)	2.39	vault flooded

4. GROUNDWATER TREATMENT SYSTEM

	Comments
X Check piping for leaks	none
X Check Bag filters	OK - 5 psi
X check GACs for leaks	OK - 4 psi
X Check PLC	OK
X check aerator	OK - 4.5 psi
X check sludge pump	unpowered
X check inspection drum	Fe bacteria
X check aeration tank	OK
X check settling chamber	OK
X check clear well	OK
X check floats in clearwell	OK

	Comments
X check feed pump	OK
Flow Reading	2.1 (gpm)
Totalized Flow Reading	475,843 (gal)
X heater on?	No
X check sludge tank	
sludge thickness	3" (in)

Collect Samples

	Date Initials Sample Numbe	Time
☐ Sample Groundwater Treatment System Influent	W-12610-	
☐ Sample Groundwater Treatment System effluent	W-12610-	

Notes

TOW 587.16 - 6.74 = 580.42

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 10/27/21

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [ ] Other task:

Weather: low 50s

Temperature: cloudy, wind ~10

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
Y	Exposure Barrier (signs of trespassing, impairment of pavement)	none identified
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

[N] Forcemain tubing requires replacement?

EW (pump)	Target Depth (feet)	DTW (feet)	Pump Operating? (Y/N) What speed?	Heater On? (Y/N)	Comments (product evident, tubing replaced, iron bacteria)
EW-6	12.74		N	N	
EW-8	11.34		ATW meter not working		
EW-12	9.42		N	N	
EW-15	6.71		N	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW						

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	OK
[X] Check Bag filters	
[X] check GACs for leaks	
[X] Check PLC	
[X] check aerator	
[X] check sludge pump	
[X] check inspection drum	
[X] check aeration tank	
[X] check settling chamber	
[X] check clear well	
[X] check floats in clearwell	

	Comments
[ ] check feed pump	
Flow Reading	(gpm)
Totalized Flow Reading	(gal)
[X] heater on?	NO
[X] check sludge tank	
sludge thickness	3" (in)

Collect Samples

	Date Initials Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-	
[ ] Sample Groundwater Treatment System effluent	W-12610-	

Notes

Installed new GAC as stage 2

Backwash stage1 GAC

clean pipe between aeration tank + inspection drum

Attachment B

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:													
Sample Location:			**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**
Sample ID:			**W-12610-021214-SSH-1401**	**W-12610-022614-SSH-1403**	**W-12610-090514-SSH-1411**	**W-12610-031615-SSH-1501**	**W-12610-121015-SSH-1115**	**W-12610-050916-SSH-1601**	**W-12610-061416-SSH-1603**	**W-12610-011617-SSH-1701**	**WT-12610-050917-SSH-01-17**	**WT-12610-113017-SSH-02-17**	**W-12610-121318-SSH-18112**
Sample Date:			**02/12/2014**	**02/26/2014**	**09/05/2014**	**03/16/2015**	**12/10/2015**	**05/09/2016**	**06/14/2016**	**01/16/2017**	**05/09/2017**	**11/30/2017**	**12/13/2018**
Parameters	**Units**	**Michigan Residential Drinking water criteria**											
VOAs													
Vinyl chloride	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Metals													
Cadmium	mg/L	0.005	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	mg/L	0.1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U	0.005 U	0.00056 J	0.005 U	0.005 U
Copper	mg/L	1	0.02 U	0.02 U	0.021	0.02 U	0.02 U	-	0.02 U	0.067	0.0063 J	0.02 U	0.02 U
Iron	mg/L	0.3	0.18	0.18	**0.54**	0.1 U	0.1 U	-	**0.39**	**0.57**	0.1 U	**0.4**	0.07 J
Lead	mg/L	0.004	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	-	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Mercury	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.1	0.02 U	0.0078 J	0.02 U	0.02 U	0.02 U	-	0.02 U	0.02 U	0.0028 J	0.074	0.0029 J
Silver	mg/L	0.034	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.000096 U	0.000098 U	0.000095 U	0.000095 U	0.0001 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U	0.000096 U	0.000095 U
PFAS													
Perfluorooctane sulfonic acid (PFOS)	mg/L	0.000016	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	0.000008	-	-	-	-	-	-	-	-	-	-	-
Wet													
Ammonia	mg/L	10	**33**	4.4	2.0 U	6.8	-	-	-	-	-	-	-
Ammonia-N	mg/L		-	-	-	-	3.4	-	2.0 U	2.2	2.0 U	0.20	0.20 U
Biochemical oxygen demand (BOD)	mg/L		17	2.3	2.0 U	2.3	9.3	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chemical oxygen demand (COD)	mg/L		20 U	10 U	10 U	10 U	10 U	-	18	24	21	13	10 U
Oil and grease (HEM), polar	mg/L		4.8 U	1.7 JB	4.9 U	4.7 U	4.8 U	-	4.7 U	4.7 U	1.2 J	-	-
Oil and grease (HEM), total	mg/L		-	-	-	-	-	-	-	-	-	4.7 U	4.8 U
pH, lab	s.u.	6.5 - 8.5	8.00 HF	8.09 HF	7.98 HF	7.69 HF	7.75 HF	-	7.54 HF	7.7 HF	7.9 HF	7.2 HF	7.9 HF
Phosphorus	mg/L	63	0.22	0.20	0.10 U	0.10 U	0.10 U	-	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Total suspended solids (TSS)	mg/L		4.0 U	4.0	4.0 U	4.0 U	4.0 U	-	4.0 U	4.0 U	4.0 U	4.0 U	3.0 J

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:												
Sample Location:		**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**effluent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**
Sample ID:		**W-12610-053119-SSH-00319**	**W-12610-120519-SSH-1519**	**W-12610-012020-SSH-00120**	**W-12610-052920-SSH-2002**	**W-11208058-121020-SSH-2012**	**W-11208058-062321-SSH-10121**	**W-12610-022614-SSH-1402**	**GW-12610-082117-SSH-08-17**	**W-12610-043018-SSH-0118**	**W-12610-060118-SSH-18101**	**W-12610-060118-SSH-18102**
Sample Date:		**05/31/2019**	**12/05/2019**	**01/20/2020**	**05/29/2020**	**12/10/2020**	**06/23/2021**	**02/26/2014**	**08/21/2017**	**04/30/2018**	**06/01/2018**	**06/01/2018 (Duplicate)**
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	0.001 U	0.001 U
Metals												
Cadmium	mg/L	0.002 U	-	0.002 U	0.002 U	0.0002 JB	**0.013**	-	-	-	0.002 U	0.002 U
Chromium	mg/L	0.0017 JB	-	0.0012 J	0.005 U	0.005 U	0.005 U	-	-	-	0.00083 J	0.0011 J
Copper	mg/L	0.012 J	-	0.0074 J	0.01 J	0.02 U	0.008 J	-	-	-	0.02 U	0.02 U
Iron	mg/L	0.11	-	0.028 J	0.058 J	0.057 J	0.1 U	-	-	-	0.043 J	0.045 J
Lead	mg/L	0.003 U	-	0.003 U	0.003 U	0.003 U	0.003 U	-	-	-	0.003 U	0.003 U
Mercury	mg/L	0.0002 U*	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	-	-	0.0002 U	0.0002 U
Nickel	mg/L	0.0059 J	-	0.0025 J	0.0072 J	0.0026 J	0.0057 J	-	-	-	0.043	0.043
Silver	mg/L	0.005 U	-	0.005 U	0.005 U	0.005 U	0.005 U	-	-	-	0.005 U	0.005 U
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	0.0019 U	0.0002 U	0.000097 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	0.0019 U	0.0002 U	0.000097 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	0.0019 U	0.0002 U	0.000097 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	**0.0054**	**0.0013**	0.000097 U	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	0.0019 U	0.0002 U	0.000097 U	0.000097 U
Aroclor-1254 (PCB-1254)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	0.0019 U	0.0002 U	0.000097 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	0.000096 U	-	0.000096 U	0.000095 U	0.000095 U	0.000096 U	-	0.0019 U	0.0002 U	0.000097 U	0.000097 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	0.0000018 U	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	0.0000018 U	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	6.7	-	-	-	-
Ammonia-N	mg/L	0.20 U	-	0.20 U	0.20 U	0.32	3.8	-	-	-	0.30	0.28
Biochemical oxygen demand (BOD)	mg/L	2.0 U	-	2.0 UH	2.0 U	2.0 U	2.0 U	-	-	-	2.0 U	2.0 U
Chemical oxygen demand (COD)	mg/L	10 U	-	10 U	6.7 J	10 U	10	-	-	-	10 U	10 U
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	4.8 U	-	4.8 U	5.8 U	4.8 U	4.0 U	-	-	-	4.8 U	4.9 U
pH, lab	s.u.	7.5 HF	-	8.0 HF	7.7 HF	8.1 HF	8.1 HF	-	-	-	7.6	7.6
Phosphorus	mg/L	0.10 U	-	0.10 U	0.10 U	0.10 U	0.14	-	-	-	0.10 U	0.10 U
Total suspended solids (TSS)	mg/L	4.0 U	-	4.0 U	4.0 U	4.0 U	4.0 U	-	-	-	4.0 U	4.0 U

Footnotes:

U Not de
J Estima
UJ Not de
R Rejecte

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:												
Sample Location:		**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**
Sample ID:		**GW-12610A-082018-SSH-18109**	**W-12610-053119-SSH-00519**	**W-12610-082819-SSH-01119**	**W-12610-012020-SSH-00220**	**W-12610-040320-SSH-2001**	**GW-11208058-081020-SSH-2007**	**W-11208058-121020-SSH-2013**	**GW-11208058-032321-SSH-01021**	**GW-11208058-082721-SSH-21108**	**W-12610-041712-SSH-SA1202**	**GW-12610-080712-SSH-001**
Sample Date:		**08/20/2018**	**05/31/2019**	**08/28/2019**	**01/20/2020**	**04/03/2020**	**08/10/2020**	**12/10/2020**	**03/23/2021**	**08/27/2021**	**04/17/2012**	**08/07/2012**
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00095 U	0.000095 U	0.000096 U	0.000096 U	0.000095 U	0.000095 U	0.00048 U	0.00049 U	0.00097 U	0.000095 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00095 U	0.000095 U	0.000096 U	0.000096 U	0.000095 U	0.000095 U	0.00048 U	0.00049 U	0.00097 U	0.000095 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00095 U	0.000095 U	0.000096 U	0.000096 U	0.000095 U	0.000095 U	0.00048 U	0.00049 U	0.00097 U	0.000095 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	**0.0025**	**0.0015**	0.000096 U	0.0002	0.000095 U	**0.001 J**	**0.0026**	**0.0033**	**0.011**	0.000095 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.00095 U	0.000095 U	0.000096 U	0.000096 U	0.00035	0.000095 U	0.00048 U	0.00049 U	0.00097 U	0.000095 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00095 U	0.000095 U	0.000096 U	0.000096 U	0.000095 U	0.000095 U	0.00048 U	0.00049 U	0.00097 U	0.000095 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00095 U	0.000095 U	0.000096 U	0.000096 U	0.000095 U	0.000095 U	0.00048 U	0.00049 U	0.00097 U	0.000095 U	0.00019 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not de
J Estima
UJ Not de
R Reject

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Machine Storage Area
Sample Location:		CB-2	CB-2	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge
Sample ID:		W-12610-040913-SSH-CB1213	W-12610-122914-SSH-1421	W-12610-041712-SSH-SA1201	GW-12610-080712-SSH-002	GW-12610-080514-SSH-1402	W-12610-122914-SSH-1420	W-12610-040915-SSH-1502	GW-12610-082515-SSH-0115	W-12610-050916-SSH-1602	W-12610-082516-SSH-1606	W-12610-041712-SSH-SA1203
Sample Date:		04/09/2013	12/29/2014	04/17/2012	08/07/2012	08/05/2014	12/29/2014	04/09/2015	08/25/2015	05/09/2016	08/25/2016	04/17/2012
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.000097 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.000097 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.000097 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.00019 U	**0.00062**	**0.00086**	**0.00068 J**	0.00022	0.00019 U	**0.00056**	0.00019	0.00019 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	0.000097 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0004
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.00019 U	0.000097 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	R	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.00019 U	0.000097 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	R	0.00018
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U	Not de
J	Estima
UJ	Not de
R	Rejecte

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:		MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MW102D1	MW102D1	MW102D1	MW102D1
Sample ID:		GW-12610-080712-SSH-003	W-12610-040913-SSH-MSA1313	W-12610-120913-SSH-010	GW-12610-080514-SSH-1401	W-12610-122914-SSH-1422	GW-12610-082515-SSH-0215	W-12610-082516-SSH-1607	GW-12610-080912-SSH-012	GW-12610-080713-JY-004	GW-12610-080614-SSH-1403	GW-12610-082615-SSH-0715
Sample Date:		08/07/2012	04/09/2013	12/09/2013	08/05/2014	12/29/2014	08/25/2015	08/25/2016	08/09/2012	08/07/2013	08/06/2014	08/26/2015
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.0019 U	0.0002 U	0.00019 U	0.00019 UH	0.00038 U	0.0019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.0019 U	0.0002 U	0.00019 U	0.00019 UH	0.00038 U	0.0019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.0019 U	0.0002 U	0.00019 U	0.00019 UH	0.00038 U	0.0019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.0019 U	0.0002 U	0.00019 U	0.00019 UH	0.00038 U	0.0019 U	0.00043	0.00019 U	0.00041 J	0.00034
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.0019 U	0.0002 U	0.00019 U	0.00019 UH	0.00038 U	0.0019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.0019 U	0.0002 U	R	0.00019 UH	0.00038 U	0.0019 U	0.00019 U	R	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	**0.0086**	0.0002 U	R	0.00019 UH	0.00019 J	0.0019 U	0.00019 U	R	0.00019 U	0.00019 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not de
J Estima
UJ Not de
R Reject

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:		MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D2	MW102D2
Sample ID:		GW-12610-082615-SSH-0815	GW-12610-082716-SSH-1613	GW-12610-082716-SSH-1614	GW-12610-082117-SSH-02-17	GW-12610A-082118-SSH-18111	GW-12610-082919-SSH-01219	GW-11208058-081020-SSH-2006	GW-11208058-082721-SSH-21107	GW-12610-080912-SSH-011	GW-12610-080713-JY-005	GW-12610-080614-SSH-1404
Sample Date:		08/26/2015 (Duplicate)	08/27/2016	08/27/2016 (Duplicate)	08/21/2017	08/21/2018	08/29/2019	08/10/2020	08/27/2021	08/09/2012	08/07/2013	08/06/2014
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.00034	0.00019 U	0.00019 U	0.00026	0.00032	0.00037 J	0.00024 J	0.00027	0.00019 U	0.00019 U	0.00013 J
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.00013 J	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U	Not de
J	Estima
UJ	Not de
R	Rejecte

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:		MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D4	MW102D4
Sample ID:		GW-12610-082615-SSH-0915	GW-12610-082616-SSH-1612	GW-12610-082117-SSH-03-17	GW-12610A-082118-SSH-18110	GW-12610-082919-SSH-01319	GW-11208058-081020-SSH-2004	GW-11208058-081020-SSH-2005	GW-11208058-082721-SSH-21106	GW-12610-080912-SSH-010	GW-12610-080713-JY-006	GW-12610-080614-SSH-1405
Sample Date:		08/26/2015	08/26/2016	08/21/2017	08/21/2018	08/29/2019	08/10/2020	08/10/2020 (Duplicate)	08/27/2021	08/09/2012	08/07/2013	08/06/2014
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.000098 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.000098 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.000098 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.00015 J	0.00048	0.00019 U	0.00009 J	0.00009 J	**0.00079 J**	0.000098 U	0.00019 U	0.00019	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.000098 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.000045 J	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.000098 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.000097 U	0.000095 U	0.000095 U	0.000098 U	0.00019 U	0.00019 U	0.00019 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U	Not de
J	Estima
UJ	Not de
R	Reject

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:		MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW300S	MW300S
Sample ID:		GW-12610-080614-SSH-1406	GW-12610-082615-SSH-1015	GW-12610-082616-SSH-1611	GW-12610-082117-SSH-04-17	GW-12610-082117-SSH-05-17	GW-12610A-082018-SSH-18108	GW-12610-082919-SSH-01419	GW-11208058-081020-SSH-2003	GW-11208058-082721-SSH-21105	GW-12610-080912-SSH-007	GW-12610-080912-SSH-008
Sample Date:		08/06/2014 (Duplicate)	08/26/2015	08/26/2016	08/21/2017	08/21/2017 (Duplicate)	08/20/2018	08/29/2019	08/10/2020	08/27/2021	08/09/2012	08/09/2012 (Duplicate)
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000078 J	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.000083 J
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U	0.000097 U	0.00019 U	0.00019 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not de
J Estima
UJ Not de
R Rejecte

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:		MW300S	MW300S	MW300S	MW300S	MW300S	MW300S	MW300S	MW300S	MW300S	MW300S	MW300S
Sample ID:		GW-12610-080713-JY-001	GW-12610-080713-JY-002	GW-12610-080614-SSH-1407	GW-12610-082615-SSH-0615	GW-12610-082616-SSH-1610	GW-12610-082117-SSH-07-17	GW-12610A-082018-SSH-18107	GW-12610-082819-SSH-00919	GW-12610-082819-SSH-01019	GW-11208058-081120-SSH-2009	GW-11208058-082321-SSH-21104
Sample Date:		08/07/2013	08/07/2013 (Duplicate)	08/06/2014	08/26/2015	08/26/2016	08/21/2017	08/20/2018	08/28/2019	08/28/2019	08/11/2020	08/23/2021
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000096 U	0.000095 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000096 U	0.000095 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000096 U	0.000095 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.00019 U	0.0001 J	0.000095 J	0.00019 U	0.000084 J	0.00019 U	0.00011 J	0.000096 J	0.000095 J	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000097 U	0.000096 U	0.000095 U	0.000086 J
Aroclor-1254 (PCB-1254)	mg/L	R	R	0.00019 U	0.00019 U	R	0.00019 U	0.00019 U	0.000097 U	0.000096 U	0.000095 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	R	R	0.00019 U	0.00019 U	R	0.00019 U	0.00019 U	0.000097 U	0.000096 U	0.000095 U	0.000097 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not de
J Estima
UJ Not de
R Reject

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:		LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S
Sample ID:		GW-12610-080812-SSH-004	GW-12610-080812-SSH-005	GW-12610-080813-JY-008	GW-12610-080614-SSH-1408	GW-12610-082615-SSH-0315	GW-12610-082616-SSH-1609	GW-12610-082217-SSH-09-17	GW-12610A-082018-SSH-18103	GW-12610-082819-SSH-00719	GW-11208058-081120-SSH-2011	GW-11208058-082321-SSH-21101
Sample Date:		08/08/2012	08/08/2012 (Duplicate)	08/08/2013	08/06/2014	08/26/2015	08/26/2016	08/22/2017	08/20/2018	08/28/2019	08/11/2020	08/23/2021
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	**0.00079**	**0.00085**	0.00019 UJ	0.00019 U	0.00019 U	0.00019 U	**0.00057**	**0.00056**	**0.0011 J**	**0.00095 J**	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	**0.001 J**	**0.001**	**0.00098**	**0.00058**	0.00019 U	0.00019 U	0.000095 U	0.000095 U	**0.0015**
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000095 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not de
J Estima
UJ Not de
R Reject

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:		LMW13S	LMW15D	LMW15D	LMW15D	LMW15D	LMW15D	LMW15D	LMW15D	LMW15D	LMW15D	LMW15D
Sample ID:		GW-11208058-082321-SSH-21102	GW-12610-080812-SSH-006	GW-12610-080813-JY-009	GW-12610-080614-SSH-1409	GW-12610-082615-SSH-0415	GW-12610-082616-SSH-1608	GW-12610-082217-SSH-10-17	GW-12610A-082018-SSH-18104	GW-12610A-082018-SSH-18105	GW-12610-082819-SSH-00819	GW-11208058-081120-SSH-2010
Sample Date:		08/23/2021 (Duplicate)	08/08/2012	08/08/2013	08/06/2014	08/26/2015	08/26/2016	08/22/2017	08/20/2018	08/20/2018 (Duplicate)	08/28/2019	08/11/2020
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.00013 J	0.00014 J	0.000065 J	0.00019 U	0.00019 U	0.00019 U	0.00021	0.00019 U	0.000096 U	0.00016 J
Aroclor-1248 (PCB-1248)	mg/L	**0.0015**	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000096 U	0.000095 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not de
J Estima
UJ Not de
R Rejecte

Attachment B

Analytical Results Sampling Summary
Racer Trust, Bay City Industrial Land
Bay City, Michigan

AOI:		Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:		LMW15D	MW301D2	MW301D2	MW301D2	MW301D2	MW301D2	MW301D2	MW301D2	MW301D2	MW301D2	MW301D2
Sample ID:		GW-11208058-082321-SSH-21100	GW-12610-080912-SSH-009	GW-12610-080713-JY-007	GW-12610-080614-SSH-1410	GW-12610-082615-SSH-0515	GW-12610-121416-SSH-1615	GW-12610-082117-SSH-06-17	GW-12610A-082018-SSH-18106	GW-12610-082819-SSH-00619	GW-11208058-081020-SSH-2008	GW-11208058-082321-SSH-21103
Sample Date:		08/23/2021	08/09/2012	08/07/2013	08/06/2014	08/26/2015	12/14/2016	08/21/2017	08/20/2018	08/28/2019	08/10/2020	08/23/2021
Parameters	**Units**											
VOAs												
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-
Metals												
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.000095 U	0.000095 U	0.000096 U
PFAS												
Perfluorooctane sulfonic acid (PFOS)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U	Not de
J	Estima
UJ	Not de
R	Rejecte

Attachment C

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-151732-1
Client Project/Site: 11208058, RACER Bay City

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
7/6/2021 12:23:08 PM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@Eurofinset.com

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Job ID: 240-151732-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-151732-1

Comments
No additional comments.

Receipt
The sample was received on 6/24/2021 9:50 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 245.1: The hot block take out temperature was 96 degrees C. The analysis of the QC in preparation batch 240-492411 shows acceptable recoveries and therefore validates the results of the associated samples: W-11208058-062321-SSH-10121 (240-151732-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Methods 3510C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-492378.

Methods 3510C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-492799.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-151732-1	W-11208058-062321-SSH-10121	Water	06/23/21 11:30	06/24/21 09:50	

Detection Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Client Sample ID: W-11208058-062321-SSH-10121 — Lab Sample ID: 240-151732-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	13		2.0	0.20	ug/L	1		200.7 Rev 4.4	Total Recoverable
Copper	8.0	J	20	3.5	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	5.7	J	20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
Chemical Oxygen Demand	10		10	1.8	mg/L	1		410.4	Total/NA
pH	8.1	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	3.8		0.20	0.076	mg/L	1		4500 NH3 H	Total/NA
Total Phosphorus as P	0.14		0.10	0.017	mg/L	1		SM4500 P E-1999	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL CAN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
1664A	HEM and SGT-HEM	1664A	TAL PEN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
4500 NH3 H	Ammonia	SM	TAL CAN
5210B-2001	BOD, 5-Day	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN
1664A	HEM and SGT-HEM (Aqueous)	1664A	TAL PEN
200.7	Preparation, Total Recoverable Metals	EPA	TAL CAN
245.1	Preparation, Mercury	EPA	TAL CAN
608	Liquid-Liquid Extraction (Separatory Funnel)	40CFR136A	TAL CAN

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Client Sample ID: W-11208058-062321-SSH-10121
Date Collected: 06/23/21 11:30
Date Received: 06/24/21 09:50

Lab Sample ID: 240-151732-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			06/26/21 03:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*47 - 134*		*06/26/21 03:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*75 - 130*		*06/26/21 03:05*	*1*
Toluene-d8 (Surr)	*93*		*69 - 122*		*06/26/21 03:05*	*1*

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Client Sample ID: W-11208058-062321-SSH-10121
Date Collected: 06/23/21 11:30
Date Received: 06/24/21 09:50

Lab Sample ID: 240-151732-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		06/29/21 08:15	06/30/21 13:42	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		06/29/21 08:15	06/30/21 13:42	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		06/29/21 08:15	06/30/21 13:42	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		06/29/21 08:15	06/30/21 13:42	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		06/29/21 08:15	06/30/21 13:42	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		06/29/21 08:15	06/30/21 13:42	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		06/29/21 08:15	06/30/21 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*10 - 114*	*06/29/21 08:15*	*06/30/21 13:42*	*1*
Tetrachloro-m-xylene	*76*		*15 - 131*	*06/29/21 08:15*	*06/30/21 13:42*	*1*

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: W-11208058-062321-SSH-10121
Date Collected: 06/23/21 11:30
Date Received: 06/24/21 09:50

Lab Sample ID: 240-151732-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/25/21 14:00	06/28/21 12:41	1
Cadmium	**13**		2.0	0.20	ug/L		06/25/21 14:00	06/28/21 12:41	1
Chromium	5.0	U	5.0	4.0	ug/L		06/25/21 14:00	06/28/21 12:41	1
Copper	**8.0**	**J**	20	3.5	ug/L		06/25/21 14:00	06/28/21 12:41	1
Iron	100	U	100	83	ug/L		06/25/21 14:00	06/28/21 12:41	1
Nickel	**5.7**	**J**	20	2.2	ug/L		06/25/21 14:00	06/28/21 12:41	1
Lead	3.0	U	3.0	2.8	ug/L		06/25/21 14:00	06/28/21 12:41	1

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-11208058-062321-SSH-10121
Date Collected: 06/23/21 11:30
Date Received: 06/24/21 09:50

Lab Sample ID: 240-151732-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/25/21 14:00	06/28/21 14:38	1

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

General Chemistry

Client Sample ID: W-11208058-062321-SSH-10121
Date Collected: 06/23/21 11:30
Date Received: 06/24/21 09:50

Lab Sample ID: 240-151732-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.0	U	4.0	1.4	mg/L		07/02/21 09:23	07/02/21 14:57	1
Chemical Oxygen Demand	**10**		10	1.8	mg/L			06/25/21 08:58	1
pH	**8.1**	**HF**	0.1	0.1	SU			06/25/21 13:02	1
Ammonia	**3.8**		0.20	0.076	mg/L			07/01/21 12:56	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/24/21 17:11	1
Total Suspended Solids	4.0	U	4.0	1.0	mg/L			06/30/21 09:43	1
Total Phosphorus as P	**0.14**		0.10	0.017	mg/L			06/30/21 13:27	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

GC/MS VOA

Analysis Batch: 492390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	624	
MB 240-492390/32	Method Blank	Total/NA	Water	624	
LCS 240-492390/33	Lab Control Sample	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 492799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	608	
MB 240-492799/21-A	Method Blank	Total/NA	Water	608	
LCS 240-492799/22-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 492945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	608	492799
MB 240-492799/21-A	Method Blank	Total/NA	Water	608	492799
LCS 240-492799/22-A	Lab Control Sample	Total/NA	Water	608	492799

Metals

Prep Batch: 492400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total Recoverable	Water	200.7	
MB 240-492400/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-492400/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 492411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	245.1	
MB 240-492411/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-492411/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 492786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total Recoverable	Water	200.7 Rev 4.4	492400
MB 240-492400/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	492400
LCS 240-492400/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	492400

Analysis Batch: 492790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	245.1	492411
MB 240-492411/1-A	Method Blank	Total/NA	Water	245.1	492411
LCS 240-492411/2-A	Lab Control Sample	Total/NA	Water	245.1	492411

General Chemistry

Analysis Batch: 492211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	5210B-2001	
SCB 240-492211/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-492211/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-492211/3	Lab Control Sample	Total/NA	Water	5210B-2001	

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

General Chemistry

Analysis Batch: 492306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	410.4	
MB 240-492306/9	Method Blank	Total/NA	Water	410.4	
LCS 240-492306/10	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 492403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	4500 H+ B-2000	
LCS 240-492403/11	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 493032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	SM 2540D	
MB 240-493032/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-493032/2	Lab Control Sample	Total/NA	Water	SM 2540D	
240-151732-1 DU	W-11208058-062321-SSH-10121	Total/NA	Water	SM 2540D	

Analysis Batch: 493088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	SM4500 P E-1999	
MB 240-493088/3	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-493088/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	

Analysis Batch: 493336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	4500 NH3 H	
MB 240-493336/14	Method Blank	Total/NA	Water	4500 NH3 H	
LCS 240-493336/25	Lab Control Sample	Total/NA	Water	4500 NH3 H	

Prep Batch: 538013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	1664A	
MB 400-538013/1-A	Method Blank	Total/NA	Water	1664A	
LCS 400-538013/2-A	Lab Control Sample	Total/NA	Water	1664A	

Analysis Batch: 538095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-151732-1	W-11208058-062321-SSH-10121	Total/NA	Water	1664A	538013
MB 400-538013/1-A	Method Blank	Total/NA	Water	1664A	538013
LCS 400-538013/2-A	Lab Control Sample	Total/NA	Water	1664A	538013

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-492390/32
Matrix: Water
Analysis Batch: 492390

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			06/25/21 22:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*47 - 134*		*06/25/21 22:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*75 - 130*		*06/25/21 22:34*	*1*
Toluene-d8 (Surr)	*93*		*69 - 122*		*06/25/21 22:34*	*1*

Lab Sample ID: LCS 240-492390/33
Matrix: Water
Analysis Batch: 492390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	20.0	17.5		ug/L		88	10 - 251

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*47 - 134*
1,2-Dichloroethane-d4 (Surr)	*82*		*75 - 130*
Toluene-d8 (Surr)	*96*		*69 - 122*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 240-492799/21-A
Matrix: Water
Analysis Batch: 492945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 492799

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/29/21 08:15	06/30/21 11:38	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/29/21 08:15	06/30/21 11:38	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/29/21 08:15	06/30/21 11:38	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/29/21 08:15	06/30/21 11:38	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/29/21 08:15	06/30/21 11:38	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/29/21 08:15	06/30/21 11:38	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/29/21 08:15	06/30/21 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*69*		*10 - 114*	*06/29/21 08:15*	*06/30/21 11:38*	*1*
Tetrachloro-m-xylene	*72*		*15 - 131*	*06/29/21 08:15*	*06/30/21 11:38*	*1*

Lab Sample ID: LCS 240-492799/22-A
Matrix: Water
Analysis Batch: 492945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492799

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.03		ug/L		81	50 - 114
Aroclor-1260	2.50	2.06		ug/L		82	8 - 127

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 240-492799/22-A
Matrix: Water
Analysis Batch: 492945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492799

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*71*		*10 - 114*
Tetrachloro-m-xylene	*76*		*15 - 131*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-492400/1-A
Matrix: Water
Analysis Batch: 492786

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 492400

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/25/21 14:00	06/28/21 12:03	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/25/21 14:00	06/28/21 12:03	1
Chromium	5.0	U	5.0	4.0	ug/L		06/25/21 14:00	06/28/21 12:03	1
Copper	20	U	20	3.5	ug/L		06/25/21 14:00	06/28/21 12:03	1
Iron	100	U	100	83	ug/L		06/25/21 14:00	06/28/21 12:03	1
Nickel	20	U	20	2.2	ug/L		06/25/21 14:00	06/28/21 12:03	1
Lead	3.0	U	3.0	2.8	ug/L		06/25/21 14:00	06/28/21 12:03	1

Lab Sample ID: LCS 240-492400/2-A
Matrix: Water
Analysis Batch: 492786

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 492400

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	100	97.4		ug/L		97	85 - 115
Cadmium	1000	1050		ug/L		105	85 - 115
Chromium	1000	941		ug/L		94	85 - 115
Copper	1000	922		ug/L		92	85 - 115
Iron	10000	9300		ug/L		93	85 - 115
Nickel	1000	1000		ug/L		100	85 - 115
Lead	1000	932		ug/L		93	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-492411/1-A
Matrix: Water
Analysis Batch: 492790

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 492411

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/25/21 14:00	06/28/21 14:27	1

Lab Sample ID: LCS 240-492411/2-A
Matrix: Water
Analysis Batch: 492790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492411

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.85		ug/L		97	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 400-538013/1-A
Matrix: Water
Analysis Batch: 538095

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538013

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.0	U	4.0	1.4	mg/L		07/02/21 09:22	07/02/21 14:57	1

Lab Sample ID: LCS 400-538013/2-A
Matrix: Water
Analysis Batch: 538095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538013

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.4	35.10		mg/L		87	78 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-492306/9
Matrix: Water
Analysis Batch: 492306

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	1.8	mg/L			06/25/21 08:37	1

Lab Sample ID: LCS 240-492306/10
Matrix: Water
Analysis Batch: 492306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	61.3	62.8		mg/L		102	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-492403/11
Matrix: Water
Analysis Batch: 492403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	8.47	8.5		SU		100	97 - 103

Method: 4500 NH3 H - Ammonia

Lab Sample ID: MB 240-493336/14
Matrix: Water
Analysis Batch: 493336

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.20	U	0.20	0.076	mg/L			07/01/21 11:53	1

Lab Sample ID: LCS 240-493336/25
Matrix: Water
Analysis Batch: 493336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	6.90	6.66		mg/L		97	90 - 110

Method: 5210B-2001 - BOD, 5-Day

Lab Sample ID: SCB 240-492211/2
Matrix: Water
Analysis Batch: 492211

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/24/21 11:03	1

Lab Sample ID: USB 240-492211/1
Matrix: Water
Analysis Batch: 492211

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/24/21 11:02	1

Lab Sample ID: LCS 240-492211/3
Matrix: Water
Analysis Batch: 492211

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	182		mg/L		92	85 - 115

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-493032/1
Matrix: Water
Analysis Batch: 493032

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	1.0	mg/L			06/30/21 09:43	1

Lab Sample ID: LCS 240-493032/2
Matrix: Water
Analysis Batch: 493032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	61.5	49.0		mg/L		80	64 - 120

Lab Sample ID: 240-151732-1 DU
Matrix: Water
Analysis Batch: 493032

Client Sample ID: W-11208058-062321-SSH-10121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	4.0	U	4.0	U	mg/L		NC	10

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-493088/3
Matrix: Water
Analysis Batch: 493088

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.017	mg/L			06/30/21 13:27	1

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method: SM4500 P E-1999 - Phosphorus (Continued)

Lab Sample ID: LCS 240-493088/4
Matrix: Water
Analysis Batch: 493088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.631	0.569		mg/L		90	77 - 120

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DCA	TOL
Lab Sample ID	Client Sample ID	(47-134)	(75-130)	(69-122)
240-151732-1	W-11208058-062321-SSH-1012	109	89	93
LCS 240-492390/33	Lab Control Sample	103	82	96
MB 240-492390/32	Method Blank	107	88	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP2	TCX2
Lab Sample ID	Client Sample ID	(10-114)	(15-131)
240-151732-1	W-11208058-062321-SSH-1012	62	76
LCS 240-492799/22-A	Lab Control Sample	71	76
MB 240-492799/21-A	Method Blank	69	72

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-151732-1

Client Sample ID: W-11208058-062321-SSH-10121

Lab Sample ID: 240-151732-1

Date Collected: 06/23/21 11:30

Matrix: Water

Date Received: 06/24/21 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	492390	06/26/21 03:05	HMB	TAL CAN
Total/NA	Prep	608			492799	06/29/21 08:15	BMB	TAL CAN
Total/NA	Analysis	608		1	492945	06/30/21 13:42	KMG	TAL CAN
Total Recoverable	Prep	200.7			492400	06/25/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	492786	06/28/21 12:41	KLC	TAL CAN
Total/NA	Prep	245.1			492411	06/25/21 14:00	MRL	TAL CAN
Total/NA	Analysis	245.1		1	492790	06/28/21 14:38	AJC	TAL CAN
Total/NA	Prep	1664A			538013	07/02/21 09:23	BAW	TAL PEN
Total/NA	Analysis	1664A		1	538095	07/02/21 14:57	BAW	TAL PEN
Total/NA	Analysis	410.4		1	492306	06/25/21 08:58	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	492403	06/25/21 13:02	KLR	TAL CAN
Total/NA	Analysis	4500 NH3 H		1	493336	07/01/21 12:56	JMR	TAL CAN
Total/NA	Analysis	5210B-2001		1	492211	06/24/21 17:11	JR	TAL CAN
Total/NA	Analysis	SM 2540D		1	493032	06/30/21 09:43	AJ	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	493088	06/30/21 13:27	KLR	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-151732-1
Project/Site: 11208058, RACER Bay City

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21 *
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-22
ANAB	ISO/IEC 17025	L2471	02-23-23
Arizona	State	AZ0710	01-12-22
Arkansas DEQ	State	88-0689	09-02-21
California	State	2510	06-30-22
Florida	NELAP	E81010	06-30-22
Georgia	State	E81010(FL)	06-30-22
Illinois	NELAP	200041	10-09-21
Iowa	State	367	08-01-22
Kansas	NELAP	E-10253	10-31-21
Kentucky (UST)	State	53	06-30-22
Kentucky (WW)	State	KY98030	12-31-21
Louisiana	NELAP	30976	06-30-22
Louisiana (DW)	State	LA017	12-31-21
Maryland	State	233	09-30-21
Massachusetts	State	M-FL094	06-30-22
Michigan	State	9912	06-30-22
New Jersey	NELAP	FL006	06-30-22
North Carolina (WW/SW)	State	314	12-31-21
Oklahoma	State	9810	08-31-21
Pennsylvania	NELAP	68-00467	01-31-22
Rhode Island	State	LAO00307	12-30-21
South Carolina	State	96026	06-30-22
Tennessee	State	TN02907	06-30-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-151732-1
Project/Site: 11208058, RACER Bay City

Laboratory: Eurofins TestAmerica, Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704286	09-30-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-22
Washington	State	C915	05-15-22

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

1/4/15

eurofins | Environment Testing America

Client Information	Sampler: S. Hoewemeyer	Lab PM: Heckler, Denise D	Carrier Tracking No(s):	COC No: 240-83589-28267.1
Client Contact: Ms. Ruth Mickle	Phone: 616 437 7734	E-Mail: Denise.Heckler@Eurofinset.com	State of Origin: MI	Page: Page 1 of 1
Company: GHD Services Inc.	PWSID:	Analysis Requested		Job #:
Address: 26850 Haggerty Rd.	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Farmington Hills	TAT Requested (days): 14			
State, Zip: MI, 48331	Compliance Project: Δ Yes Δ No			
Phone: 248 893 3400	PO #: Purchase Order Requested			Other:
Email: ruth.mickle@ghd.com	WO #: 11208058			
Project Name: 11208058, RACER Bay City	Project #: 24006288			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7 - Select Metals	410.4, 4500_P_E, SM4500NH3_D	624_LL - Vinyl chloride	608_PCB - PCBs	5210B - BOD	2540D, SM4500_H+	1664A_NP - HEM	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	S	A	N	N	N	S	X	
W-11208058-062321-SSH-10121	6/23/21	1130	G	Water	N	N	X	X	X	X	X	X	X		

240-151732 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological	☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	6/23/21 1400	GHD	[signature]	6-24-21 9:50	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 1441656, 1441657	Cooler Temperature(s) °C and Other Remarks:

Ver: 11.01.2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 151732**
Canton Facility

Client GHD Services Inc. Site Name _____ Cooler unpacked by: Justin H

Cooler Received on 6-24-21 Opened on 6-24-21

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-11 (CF **+0.1** °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 1.5 °C

IR GUN #IR-12 (CF **+0.2**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   - -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   - -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   - -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC022887**
14. Were VOAs on the COC? (Yes) No
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes (No)
17. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
W-112080SB-062321-SSH-1012 1	240-151732-E-1	Plastic 500ml - with Sulfuric Acid	<2			
W-112080SB-062321-SSH-1012 1	240-151732-F-1	Plastic 500ml - with Nitric Acid	<2			
W-112080SB-062321-SSH-1012 1	240-151732-J-1	Amber Glass 1 liter - Sulfuric Acid				
W-112080SB-062321-SSH-1012 1	240-151732-K-1	Amber Glass 1 liter - Sulfuric Acid				

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Heckler, Denise D	Carrier Tracking No(s):	COC No: 240-138749.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Denise.Heckler@Eurofinset.com	State of Origin: Michigan	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-151732-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 7/8/2021			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: 11208058, RACER Bay City	Project #: 24006288			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1664A/1664A_P_W (MOD) HEM	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
W-11208058-062321-SSH-10121 (240-151732-1)	6/23/21	11:30 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date:	Time: Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	6/24/21 1717	ETA	[signature]	6/25/21 930	ETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.4 GC, 1.1 °C IR5

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-151732-1

Login Number: 151732
List Number: 2
Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola
List Creation: 06/25/21 11:25 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4°C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Memorandum

May 04, 2021

To	John-Eric Pardys		
From	Ruth Mickle/lg/2	**Tel**	612-524-6872
Subject	Analytical Results and Reduced Validation 2021 Semi-Annual Groundwater Sampling RACER Bay City Site Bay City, Michigan March 2021	**Project no.**	11208058-B04

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the 2021 Semi-Annual Groundwater Sampling at the RACER Bay City Site during March 2021. Samples were submitted to Eurofins TestAmerica (TestAmerica), located in North Canton, Ohio. 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, duplicate 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. "National Functional Guidelines for Organic Superfund Methods Data Review", EPA 540-R-2017-002, January 2017.

Item i. 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. The sample chain of custody document and analytical report 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 (0-6°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.

4. Surrogate Spike Recoveries

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 polychlorinated biphenyl (PCB) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within control limits.

5. Laboratory Control Sample 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.

The LCS contained the compounds specified in the method. All 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 relative percent difference (RPD) between the MS and MSD is used to assess analytical precision. Since the MS/MSD results were generated from non-project samples, MS/MSD was not used to evaluate project sample data.

7. Field QA/QC Samples

There were no field QA/QC samples.

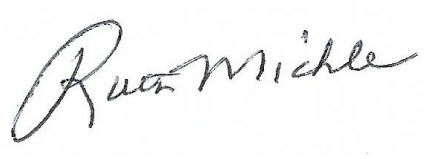
8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the MDL were qualified 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 without qualification.

Regards



Ruth Mickle
Chemist

Table 1

Sample Collection and Analysis Summary
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
March 2021

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters: PCBs	Comments
Eurofins TestAmerica SDG No.: 240-146381-1						
GW-11208058-032321-SSH-0102	influent-GWTS	water	03/23/2021	13:00	X	

Notes:

PCBs - Polychlorinated Biphenyls
SDG - Sample Delivery Group

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
March 2021

Location ID:	**influent-GWTS**
Sample Name:	**GW-11208058-032321-SSH-01021**
Sample Date:	**03/23/2021**

Parameters	**Unit**	
PCBs		
Aroclor-1016 (PCB-1016)	µg/L	0.49 U
Aroclor-1221 (PCB-1221)	µg/L	0.49 U
Aroclor-1232 (PCB-1232)	µg/L	0.49 U
Aroclor-1242 (PCB-1242)	µg/L	3.3
Aroclor-1248 (PCB-1248)	µg/L	0.49 U
Aroclor-1254 (PCB-1254)	µg/L	0.49 U
Aroclor-1260 (PCB-1260)	µg/L	0.49 U

Notes:

PCBs- Polychlorinated Biphenyls
U - Not detected at the associated reporting limit

Table 3

Analytical Method
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
March 2021

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Polychlorinated Biphenyls (PCBs)	SW-846 8082A	Water	Iced, 0-6° C	7	40

Notes:

Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Technical Memorandum

September 22, 2021

To	John-Eric Pardys, GHD	**Tel**	+1 612 524 6872
		Email	Ruth.Mickle@ghd.com
From	Ruth Mickle/lg/4	**Ref. No.**	11208058
Subject	Analytical Results and Reduced Validation 2021 Semi-Annual Groundwater Sampling RACER Bay City Site Bay City, Michigan August 2021		

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the 2021 Semi-Annual Groundwater Sampling at the RACER Bay City Site during August 2021. Samples were submitted to Eurofins TestAmerica (TestAmerica), located in North Canton, Ohio. 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, duplicate 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 document entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", EPA 540-R-2017-002, January 2017.

Item i. 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. The 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 the majority received by the laboratory within 0-6°C. Samples collected on August 27 were received at 9.4 °C. Since the samples are considered stable at this temperature, no data qualification was required.

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.

4. Surrogate Spike Recoveries

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 polychlorinated biphenyl (PCB) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within control limits.

5. Laboratory Control Sample Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS/LCSD contained all compounds specified in the method. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

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 or 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.

The matrix spike samples were spiked with the compounds specified in the method. The percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of one field duplicate set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample set was 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.

The field duplicate results were within acceptable agreement.

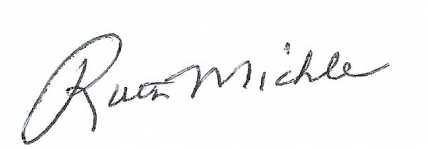
8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the MDL were qualified 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 without qualification.

Regards,



Ruth Mickle

Chemist

Table 1

Sample Collection and Analysis Summary
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2021

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters: PCBs	Comments
Eurofins TestAmerica SDG No.: 240-154992-1						
GW-11208058-082321-SSH-21100	LMW15D	water	08/23/2021	08:36	X	
GW-11208058-082321-SSH-21101	LMW13S	water	08/23/2021	09:46	X	
GW-11208058-082321-SSH-21102	LMW13S	water	08/23/2021	09:56	X	Field duplicate of -SSH-21101
GW-11208058-082321-SSH-21103	MW301D2	water	08/23/2021	11:11	X	
GW-11208058-082321-SSH-21104	MW300S	water	08/23/2021	12:21	X	
Eurofins TestAmerica SDG No.: 240-155279-1						
GW-11208058-082721-SSH-21105	MW102D4	water	08/27/2021	10:36	X	
GW-11208058-082721-SSH-21106	MW102D2	water	08/27/2021	11:46	X	MS/MSD
GW-11208058-082721-SSH-21107	MW102D1	water	08/27/2021	13:16	X	
GW-11208058-082721-SSH-21108	influent-GWTS	water	08/27/2021	12:40	X	

Notes:

PCBs - Polychlorinated Biphenyls
MS/MSD -Matrix Spike/ Matrix Spike Duplicate
SDG - Sample Delivery Group

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2021

Location ID:		influent-GWTS	LMW13S	LMW13S	LMW15D	MW102D1
Sample Name:		GW-11208058-082721-SSH-21108	GW-11208058-082321-SSH-21101	GW-11208058-082321-SSH-21102	GW-11208058-082321-SSH-21100	GW-11208058-082721-SSH-21107
Sample Date:		08/27/2021	08/23/2021	08/23/2021 Duplicate	08/23/2021	08/27/2021
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.97 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.97 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.97 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	11	0.095 U	0.095 U	0.095 U	0.27
Aroclor-1248 (PCB-1248)	µg/L	0.97 U	1.5	1.5	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.97 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.97 U	0.095 U	0.095 U	0.095 U	0.095 U

Notes:
PCBs- Polychlorinated Biphenyls
U - Not detected at the associated reporting limit
J - The result is an estimated quantity

Table 2

Validated Analytical Summary Results
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2021

Location ID:		**MW102D2**	**MW102D4**	**MW300S**	**MW301D2**
Sample Name:		**GW-11208058-082721-SSH-21106**	**GW-11208058-082721-SSH-21105**	**GW-11208058-082321-SSH-21104**	**GW-11208058-082321-SSH-21103**
Sample Date:		**08/27/2021**	**08/27/2021**	**08/23/2021**	**08/23/2021**
Parameters	**Unit**				
PCBs					
Aroclor-1016 (PCB-1016)	µg/L	0.098 U	0.097 U	0.097 U	0.096 U
Aroclor-1221 (PCB-1221)	µg/L	0.098 U	0.097 U	0.097 U	0.096 U
Aroclor-1232 (PCB-1232)	µg/L	0.098 U	0.097 U	0.097 U	0.096 U
Aroclor-1242 (PCB-1242)	µg/L	0.098 U	0.097 U	0.097 U	0.096 U
Aroclor-1248 (PCB-1248)	µg/L	0.098 U	0.097 U	0.086 J	0.096 U
Aroclor-1254 (PCB-1254)	µg/L	0.098 U	0.097 U	0.097 U	0.096 U
Aroclor-1260 (PCB-1260)	µg/L	0.098 U	0.097 U	0.097 U	0.096 U

Notes:
PCBs- Polychlorinated Biphenyls
U - Not detected at the associated reporting
J - The result is an estimated quantity

Table 3

Analytical Method
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2021

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Polychlorinated Biphenyls (PCBs)	SW-846 8082A	Water	Iced, 0-6° C	7	40

Notes:
Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-155279-1
Client Project/Site: 11208058, RACER Bay City

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
9/14/2021 11:47:24 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@Eurofinset.com

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Job ID: 240-155279-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-155279-1

Comments
No additional comments.

Receipt
The samples were received on 8/28/2021 10:23 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 9.4º C.

GC Semi VOA
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-11208058-082721-SSH-21105 (240-155279-1) and GW-11208058-082721-SSH-21107 (240-155279-3).

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-11208058-082721-SSH-21107 (240-155279-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-501971.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-502522.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-155279-1	GW-11208058-082721-SSH-21105	Water	08/27/21 10:36	08/28/21 10:23
240-155279-2	GW-11208058-082721-SSH-21106	Water	08/27/21 11:46	08/28/21 10:23
240-155279-3	GW-11208058-082721-SSH-21107	Water	08/27/21 13:16	08/28/21 10:23
240-155279-4	GW-11208058-082721-SSH-21108	Water	08/27/21 12:40	08/28/21 10:23

Detection Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Client Sample ID: GW-11208058-082721-SSH-21105 — Lab Sample ID: 240-155279-1

No Detections.

Client Sample ID: GW-11208058-082721-SSH-21106 — Lab Sample ID: 240-155279-2

No Detections.

Client Sample ID: GW-11208058-082721-SSH-21107 — Lab Sample ID: 240-155279-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.27	B	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-11208058-082721-SSH-21108 — Lab Sample ID: 240-155279-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	11		0.97	0.74	ug/L	10		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11208058-082721-SSH-21105
Date Collected: 08/27/21 10:36
Date Received: 08/28/21 10:23

Lab Sample ID: 240-155279-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		08/31/21 10:38	09/02/21 10:22	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		08/31/21 10:38	09/02/21 10:22	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		08/31/21 10:38	09/02/21 10:22	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		08/31/21 10:38	09/02/21 10:22	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		08/31/21 10:38	09/02/21 10:22	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		08/31/21 10:38	09/02/21 10:22	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		08/31/21 10:38	09/02/21 10:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*22 - 120*	*08/31/21 10:38*	*09/02/21 10:22*	*1*
DCB Decachlorobiphenyl	*25*		*10 - 120*	*08/31/21 10:38*	*09/02/21 10:22*	*1*

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11208058-082721-SSH-21106
Date Collected: 08/27/21 11:46
Date Received: 08/28/21 10:23

Lab Sample ID: 240-155279-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		09/01/21 11:08	09/03/21 08:36	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		09/01/21 11:08	09/03/21 08:36	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		09/01/21 11:08	09/03/21 08:36	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		09/01/21 11:08	09/03/21 08:36	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		09/01/21 11:08	09/03/21 08:36	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		09/01/21 11:08	09/03/21 08:36	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		09/01/21 11:08	09/03/21 08:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*22 - 120*	*09/01/21 11:08*	*09/03/21 08:36*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 120*	*09/01/21 11:08*	*09/03/21 08:36*	*1*

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11208058-082721-SSH-21107
Date Collected: 08/27/21 13:16
Date Received: 08/28/21 10:23

Lab Sample ID: 240-155279-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		09/07/21 08:21	09/09/21 12:24	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		09/07/21 08:21	09/09/21 12:24	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/07/21 08:21	09/09/21 12:24	1
Aroclor-1242	**0.27**	**B**	0.095	0.072	ug/L		09/07/21 08:21	09/09/21 12:24	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		09/07/21 08:21	09/09/21 12:24	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		09/07/21 08:21	09/09/21 12:24	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		09/07/21 08:21	09/09/21 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*22 - 120*	*09/07/21 08:21*	*09/09/21 12:24*	*1*
DCB Decachlorobiphenyl	*44*		*10 - 120*	*09/07/21 08:21*	*09/09/21 12:24*	*1*

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11208058-082721-SSH-21108
Date Collected: 08/27/21 12:40
Date Received: 08/28/21 10:23

Lab Sample ID: 240-155279-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.97	U	0.97	0.54	ug/L		08/31/21 10:38	09/02/21 10:51	10
Aroclor-1221	0.97	U	0.97	0.55	ug/L		08/31/21 10:38	09/02/21 10:51	10
Aroclor-1232	0.97	U	0.97	0.72	ug/L		08/31/21 10:38	09/02/21 10:51	10
Aroclor-1242	**11**		0.97	0.74	ug/L		08/31/21 10:38	09/02/21 10:51	10
Aroclor-1248	0.97	U	0.97	0.49	ug/L		08/31/21 10:38	09/02/21 10:51	10
Aroclor-1254	0.97	U	0.97	0.39	ug/L		08/31/21 10:38	09/02/21 10:51	10
Aroclor-1260	0.97	U	0.97	0.45	ug/L		08/31/21 10:38	09/02/21 10:51	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*	*p*	*22 - 120*	*08/31/21 10:38*	*09/02/21 10:51*	*10*
DCB Decachlorobiphenyl	*45*		*10 - 120*	*08/31/21 10:38*	*09/02/21 10:51*	*10*

GC Semi VOA

Prep Batch: 501778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-155279-1	GW-11208058-082721-SSH-21105	Total/NA	Water	3510C	
240-155279-4	GW-11208058-082721-SSH-21108	Total/NA	Water	3510C	
MB 240-501778/16-A	Method Blank	Total/NA	Water	3510C	
LCS 240-501778/17-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 501971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-155279-2	GW-11208058-082721-SSH-21106	Total/NA	Water	3510C	
MB 240-501971/12-A	Method Blank	Total/NA	Water	3510C	
LCS 240-501971/13-A	Lab Control Sample	Total/NA	Water	3510C	
240-155279-2 MS	GW-11208058-082721-SSH-21106	Total/NA	Water	3510C	
240-155279-2 MSD	GW-11208058-082721-SSH-21106	Total/NA	Water	3510C	

Analysis Batch: 502021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-155279-1	GW-11208058-082721-SSH-21105	Total/NA	Water	8082A	501778
240-155279-4	GW-11208058-082721-SSH-21108	Total/NA	Water	8082A	501778
MB 240-501778/16-A	Method Blank	Total/NA	Water	8082A	501778
LCS 240-501778/17-A	Lab Control Sample	Total/NA	Water	8082A	501778

Analysis Batch: 502239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-155279-2	GW-11208058-082721-SSH-21106	Total/NA	Water	8082A	501971
MB 240-501971/12-A	Method Blank	Total/NA	Water	8082A	501971
LCS 240-501971/13-A	Lab Control Sample	Total/NA	Water	8082A	501971
240-155279-2 MS	GW-11208058-082721-SSH-21106	Total/NA	Water	8082A	501971
240-155279-2 MSD	GW-11208058-082721-SSH-21106	Total/NA	Water	8082A	501971

Prep Batch: 502522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-155279-3	GW-11208058-082721-SSH-21107	Total/NA	Water	3510C	
MB 240-502522/17-A	Method Blank	Total/NA	Water	3510C	
LCS 240-502522/18-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 240-502522/19-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 502815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-155279-3	GW-11208058-082721-SSH-21107	Total/NA	Water	8082A	502522
MB 240-502522/17-A	Method Blank	Total/NA	Water	8082A	502522
LCS 240-502522/18-A	Lab Control Sample	Total/NA	Water	8082A	502522
LCSD 240-502522/19-A	Lab Control Sample Dup	Total/NA	Water	8082A	502522

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-501778/16-A
Matrix: Water
Analysis Batch: 502021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501778

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/31/21 10:38	09/02/21 08:11	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/31/21 10:38	09/02/21 08:11	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/31/21 10:38	09/02/21 08:11	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/31/21 10:38	09/02/21 08:11	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/31/21 10:38	09/02/21 08:11	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/31/21 10:38	09/02/21 08:11	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/31/21 10:38	09/02/21 08:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*22 - 120*	*08/31/21 10:38*	*09/02/21 08:11*	*1*
DCB Decachlorobiphenyl	*80*		*10 - 120*	*08/31/21 10:38*	*09/02/21 08:11*	*1*

Lab Sample ID: LCS 240-501778/17-A
Matrix: Water
Analysis Batch: 502021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501778

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.03		ug/L		81	28 - 120
Aroclor-1260	2.50	1.81		ug/L		72	30 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*77*		*22 - 120*
DCB Decachlorobiphenyl	*82*		*10 - 120*

Lab Sample ID: MB 240-501971/12-A
Matrix: Water
Analysis Batch: 502239

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		09/01/21 11:08	09/03/21 07:52	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		09/01/21 11:08	09/03/21 07:52	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		09/01/21 11:08	09/03/21 07:52	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		09/01/21 11:08	09/03/21 07:52	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		09/01/21 11:08	09/03/21 07:52	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		09/01/21 11:08	09/03/21 07:52	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		09/01/21 11:08	09/03/21 07:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*22 - 120*	*09/01/21 11:08*	*09/03/21 07:52*	*1*
DCB Decachlorobiphenyl	*72*		*10 - 120*	*09/01/21 11:08*	*09/03/21 07:52*	*1*

Lab Sample ID: LCS 240-501971/13-A
Matrix: Water
Analysis Batch: 502239

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.84		ug/L		74	28 - 120
Aroclor-1260	2.50	1.61		ug/L		65	30 - 120

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	70		22 - 120
DCB Decachlorobiphenyl	68		10 - 120

Lab Sample ID: 240-155279-2 MS — **Client Sample ID: GW-11208058-082721-SSH-21106**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 502239 — **Prep Batch: 501971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	0.098	U	5.00	3.16		ug/L		63	14 - 120
Aroclor-1260	0.098	U	5.00	3.18		ug/L		64	10 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	62		22 - 120
DCB Decachlorobiphenyl	57		10 - 120

Lab Sample ID: 240-155279-2 MSD — **Client Sample ID: GW-11208058-082721-SSH-21106**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 502239 — **Prep Batch: 501971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	0.098	U	5.00	3.12		ug/L		62	14 - 120	1	30
Aroclor-1260	0.098	U	5.00	3.21		ug/L		64	10 - 120	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	65		22 - 120
DCB Decachlorobiphenyl	60		10 - 120

Lab Sample ID: MB 240-502522/17-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 502815 — **Prep Batch: 502522**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		09/07/21 08:21	09/09/21 07:56	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		09/07/21 08:21	09/09/21 07:56	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		09/07/21 08:21	09/09/21 07:56	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		09/07/21 08:21	09/09/21 07:56	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		09/07/21 08:21	09/09/21 07:56	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		09/07/21 08:21	09/09/21 07:56	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		09/07/21 08:21	09/09/21 07:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		22 - 120	09/07/21 08:21	09/09/21 07:56	1
DCB Decachlorobiphenyl	99		10 - 120	09/07/21 08:21	09/09/21 07:56	1

Lab Sample ID: LCS 240-502522/18-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 502815 — **Prep Batch: 502522**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.25		ug/L		90	28 - 120
Aroclor-1260	2.50	2.47		ug/L		99	30 - 120

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	*48*	*p*	*22 - 120*
DCB Decachlorobiphenyl	*106*		*10 - 120*

Lab Sample ID: LCSD 240-502522/19-A
Matrix: Water
Analysis Batch: 502815

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 502522

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016			2.50	2.37		ug/L		95	28 - 120	5	30
Aroclor-1260			2.50	2.59		ug/L		104	30 - 120	5	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	*97*		*22 - 120*
DCB Decachlorobiphenyl	*106*		*10 - 120*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(22-120)	(10-120)
240-155279-1	GW-11208058-082721-SSH-211	52	25
240-155279-4	GW-11208058-082721-SSH-21108	67 p	45
LCS 240-501778/17-A	Lab Control Sample	77	82
MB 240-501778/16-A	Method Blank	73	80

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(22-120)	(10-120)
240-155279-2	GW-11208058-082721-SSH-211	55	45
240-155279-2 MS	GW-11208058-082721-SSH-21106	62	57
240-155279-2 MSD	GW-11208058-082721-SSH-21106	65	60
240-155279-3	GW-11208058-082721-SSH-21107	71	44
LCS 240-501971/13-A	Lab Control Sample	70	68
LCS 240-502522/18-A	Lab Control Sample	48 p	106
LCSD 240-502522/19-A	Lab Control Sample Dup	97	106
MB 240-501971/12-A	Method Blank	73	72
MB 240-502522/17-A	Method Blank	85	99

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-155279-1

Client Sample ID: GW-11208058-082721-SSH-21105

Lab Sample ID: 240-155279-1
Date Collected: 08/27/21 10:36
Matrix: Water
Date Received: 08/28/21 10:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			501778	08/31/21 10:38	MDH	TAL CAN
Total/NA	Analysis	8082A		1	502021	09/02/21 10:22	LSH	TAL CAN

Client Sample ID: GW-11208058-082721-SSH-21106

Lab Sample ID: 240-155279-2
Date Collected: 08/27/21 11:46
Matrix: Water
Date Received: 08/28/21 10:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			501971	09/01/21 11:08	MDH	TAL CAN
Total/NA	Analysis	8082A		1	502239	09/03/21 08:36	LSH	TAL CAN

Client Sample ID: GW-11208058-082721-SSH-21107

Lab Sample ID: 240-155279-3
Date Collected: 08/27/21 13:16
Matrix: Water
Date Received: 08/28/21 10:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			502522	09/07/21 08:21	BMB	TAL CAN
Total/NA	Analysis	8082A		1	502815	09/09/21 12:24	LSH	TAL CAN

Client Sample ID: GW-11208058-082721-SSH-21108

Lab Sample ID: 240-155279-4
Date Collected: 08/27/21 12:40
Matrix: Water
Date Received: 08/28/21 10:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			501778	08/31/21 10:38	MDH	TAL CAN
Total/NA	Analysis	8082A		10	502021	09/02/21 10:51	LSH	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-155279-1
Project/Site: 11208058, RACER Bay City

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	11570	09-14-21
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone: 330-497-9396 Fax: 330-497-0772

9.3/9.4 WATER

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: S. Hoevemeyer	Lab PM: Heckler, Denise D	Carrier Tracking No(s): FedEx	COC No: 240-85558-28266.2
Client Contact: Ms. Ruth Mickle	Phone: 616 437 7734	E-Mail: Denise.Heckler@Eurofinset.com	State of Origin: MI	Page: Page 2 of 2
Company: GHD Services Inc.	PWSID:	Analysis Requested		Job #:
Address: 26850 Haggerty Rd.	Due Date Requested: 9/10/21			Preservation Codes:
City: Farmington Hills	TAT Requested (days): 14			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: MI, 48331	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			Other:
Email: ruth.mickle@ghd.com	WO #: 11208058			
Project Name: 11208058, RACER Bay City	Project #: 24006288			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A - PCBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
GW-11208058-082721-SSH-21105	8/27/21	1036	G	Water	N	N	X		
-21106		1146	G	W	N	Y	X		MS/MSD
-21107		1316	G	W	N	N	X		
GW-11208058-082721-SSH-21108		1240	G	W	N	N	X		

240-155279 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological	☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8/27/21 1430	GHD	Mandy Blue	8/28/21 10:23	EPA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 1655889, 1655890	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 155279

Canton Facility

Client GHA service INC Site Name

Cooler Received on 8/28/21 Opened on 8/28/21

Cooler unpacked by: Mandy Blue

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-11 (CF +0.1 °C) Observed Cooler Temp. 9.3 °C Corrected Cooler Temp. 9.4 °C

IR GUN #IR-12 (CF +0.2°C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC157842
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # ____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? ____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.

Time preserved: ____ Preservative(s) added/Lot number(s): ____

VOA Sample Preservation - Date/Time VOAs Frozen: ____

WI-NC-099