January 15, 2019 Reference No. 012610

Ms. Amanda Armbruster
Michigan Department of Environmental Quality
Remediation and Redevelopment Division
Saginaw Bay District Office
401 Ketchum Street, Suite B
Bay City, Michigan
U.S.A. 48708

Dear Ms. Armbruster:

Re: 2018 Annual Technical Progress Report Submittal
RACER Trust Bay City Powertrain Industrial Lands

GHD has prepared this 2018 Annual Technical Progress Report (Annual Report) for the Revitalizing Auto Communities Environmental Response Trust (RACER) Bay City Powertrain Industrial Lands (Site) located in Bay City, Michigan.

This Annual Report covers the RACER Site for the period from November 16, 2017 through November 15, 2018, 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 MDEQ. 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. 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, 2018 approximately 655,042 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 November 30, 2017 and June 1, 2018. There were no exceedances of permit discharge standards observed, as presented in Table 3.

1.1.4 Saginaw River Levels at Essexville, Michigan

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 of 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 at former location SG-1 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 is 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-1 on December 19, 2018 was 580.05 ft AMSL.

1.1.5 Extraction System/Groundwater Monitoring Activities

Table 4 presents the sample results for the extraction system discharge samples (i.e., the groundwater treatment system influent). The 18th annual groundwater sampling event (August 2018) was also conducted during this reporting period. Table 5 presents the 18th 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 December 19, 2018 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, 2017 to November 15, 2018) and data validation for the 2018 annual sampling event are presented in Attachment C.

A review of past 10 years of groundwater sample results reveals that only one monitoring well location (LMW13S) had a reported concentration above the MDEQ Part 201 Residential and Non-Residential Drinking Water Criteria for PCBs of 0.5 (parts per billion) ppb and the groundwater results for the past two years shows four monitoring well locations (MW102D1, MW102D2, LMW13S and LMW15D) had reported concentrations above the MDEQ Part 201 Groundwater Surface Water Interface Criteria for PCBs of 0.2 ppb.

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 termanent markers were reviewed and approved by the

MDEQ on November 4, 2015. The permanent markers have been manufactured and will be installed following the completion of pending stormwater work that is necessary as a result of the GMC bankruptcy process.

A Corrective Measures Remedial Action Plan Completion Report was prepared and submitted to the 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.

2. Proposed Modifications to the Monitoring Program

Once the stormwater work is completed, which will be the last of the planned modifications needed as a result of the bankruptcy process that resulted in RACER receiving ownership of the Site and GM LLC obtaining ownership of the adjacent operating facility, RACER will update the November 14, 2016 OM&M Plan and submit to MDEQ.

3. Schedule

All activities have been completed within the required time frames.

As part of the 2019 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 2018) and semi-annual effluent samples. The 2019 annual groundwater monitoring event will be completed in August 2019.

Permanent markers will be installed following the completion of the pending stormwater work.

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

Sincerely,

GHD

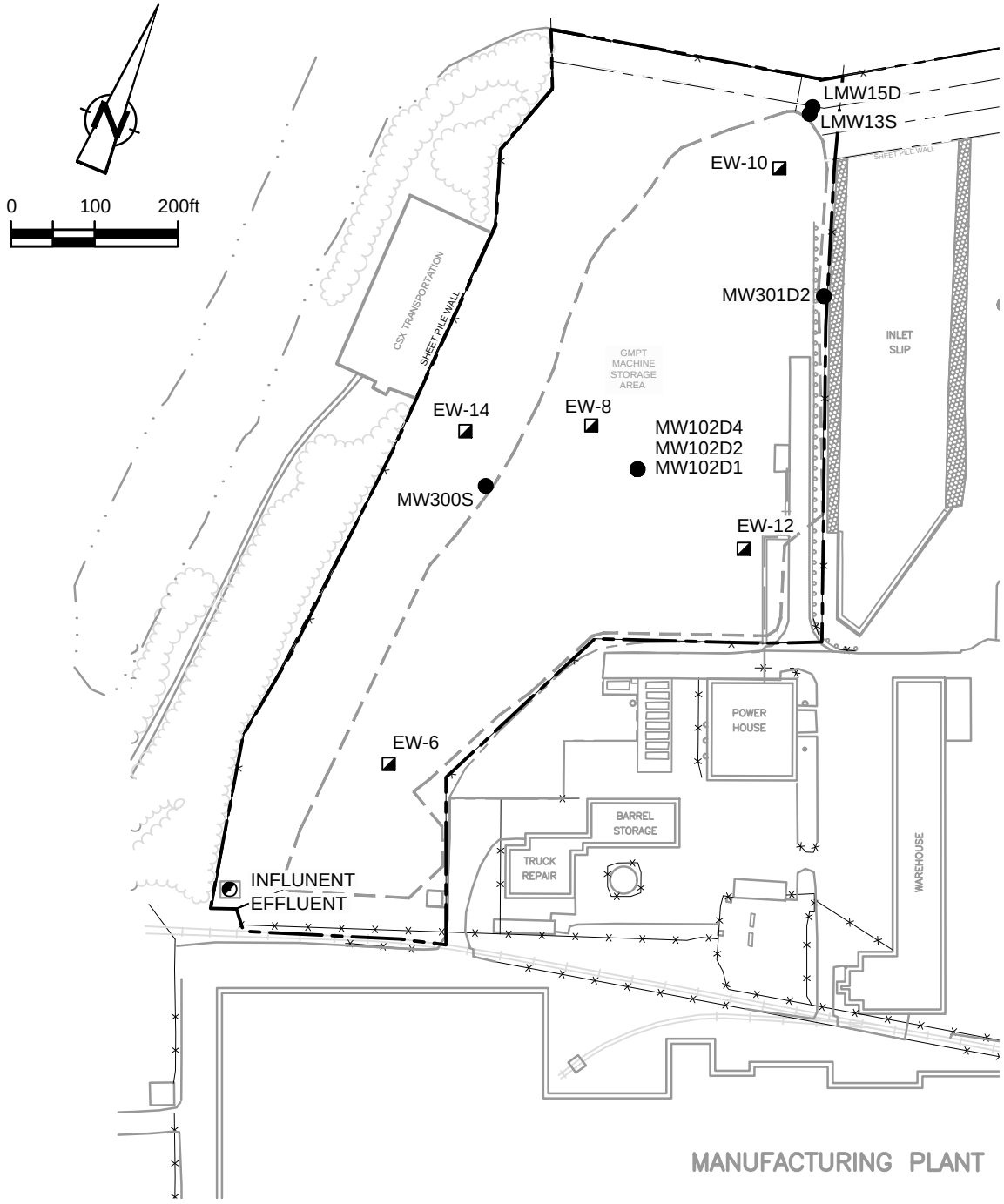
John-Eric Pardys, P.Eng.

GM/kf/3

Encl.

Figure 1	Chemical Analysis Monitoring Locations
Figure 2	Water Elevation Monitoring Locations
Figure 3	Shallow Groundwater Elevations – December 19, 2018
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 (2009 to 2018)
Attachment C	Analytical Results and Reduced Validation–2018 Annual Sampling Event

cc: Richard Finn, City of Bay City
Thomas McDowell, MDEQ
Grant Trigger, RACER Trust
Dave Favero, RACER Trust
Michael Tomka, GHD



LEGEND

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

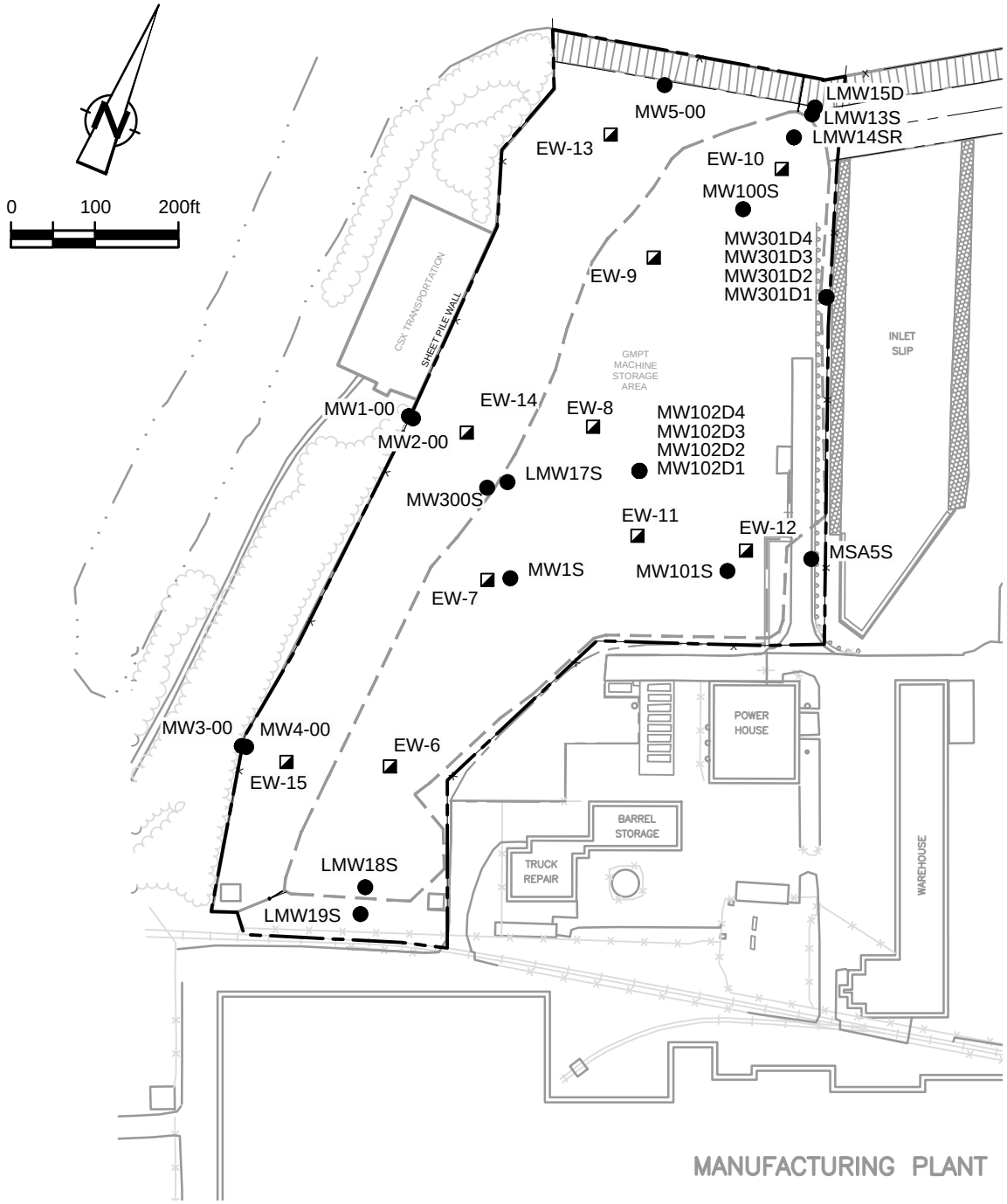
MW403S ● MONITORING WELL LOCATION
EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION
◪ GROUNDWATER TREATMENT SYSTEM SAMPLE LOCATION

figure 1

CHEMICAL ANALYSIS MONITORING LOCATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
Bay City, Michigan

SOURCE:
McLAREN HART ENVIRONMENTAL ENGINEERING CORP.
DATE: 08/29/94 DRAWING: 7900B216
ALL ELEVATIONS IN NAVD88

P:\drawings\12000s\12610\12610-corrs\12610-T04(ARMB003)\12610-T04(ARMB003)GN\12610-T04(ARMB003)GN-WA001.DWG Plot Date: DEC 20, 2018



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MW403S ● MONITORING WELL LOCATION

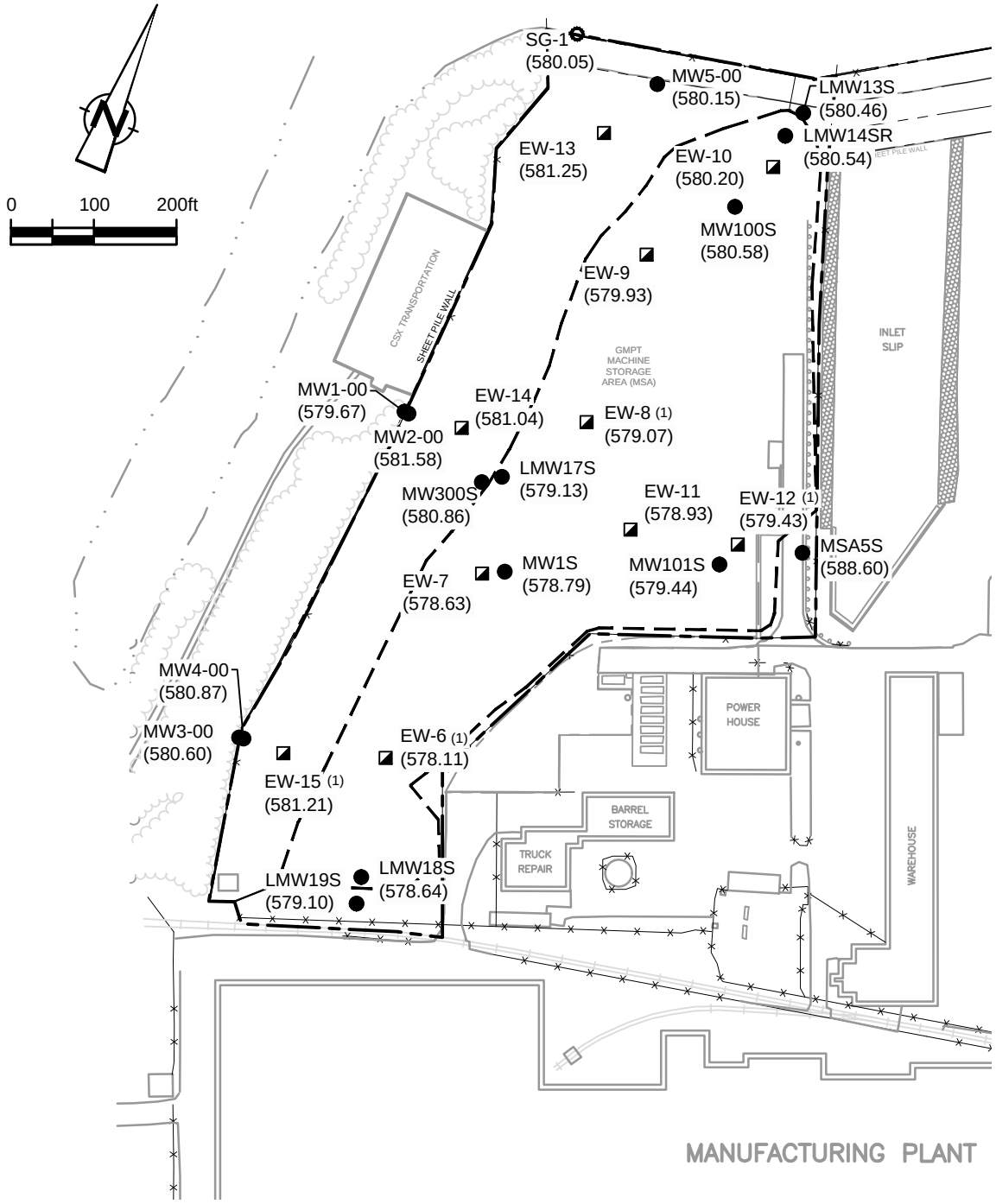
EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION

figure 2

WATER ELEVATION MONITORING LOCATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
Bay City, Michigan

SOURCE:
McLAREN HART ENVIRONMENTAL ENGINEERING CORP.
DATE: 08/29/94 DRAWING: 7900B216
ALL ELEVATIONS IN NAVD88

P:\drawings\12000s\12610\12610-corrs\12610-T04(ARMB003)\12610-T04(ARMB003)GN\12610-T04(ARMB003)GN-WA002.DWG Plot Date: DEC 20, 2018



LEGEND

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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)
(1)	PUMP LOCATION

figure 3

SHALLOW GROUNDWATER ELEVATIONS
DECEMBER 19, 2018
RACER TRUST - BAY CITY INDUSTRIAL LAND
Bay City, Michigan

SOURCE:
McLAREN HART ENVIRONMENTAL ENGINEERING CORP.
DATE: 08/29/94 DRAWING: 7900B216
ALL ELEVATIONS IN NAVD88

P:\drawings\12000s\12610\12610-corrs\12610-T04(ARMB003)\12610-T04(ARMB003)GN\12610-T04(ARMB003)GN-WA003.DWG Plot Date: JAN 10, 2019

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) Jan. 29, 2018	Water Elevation (ft AMSL) Feb. 27, 2018	Water Elevation (ft AMSL) Mar. 29, 2018	Water Elevation (ft AMSL) Apr. 30, 2018	Water Elevation (ft AMSL) May 31, 2017	Water Elevation (ft AMSL) Jun. 20, 2018	Water Elevation (ft AMSL) Jul. 30, 2018
Machine Storage Area										
EW-6	589.74	570.39	572.39	577.77 (1)	577.8 (1)	577.81 (1)	578.45 (1)	577.91 (1)	577.95 (1)	578.00 (1)
EW-7	587.99	571.14	571.64	578.44	578.62	578.63	578.58	578.62	578.61	578.59
EW-8	588.34	572.29	573.29	578.79 (1)	578.95 (1)	579.05 (1)	579.07	580.41 (1)	578.95 (1)	579.05 (1)
EW-9	588.04	572.19	573.69	579.35	579.97	579.79	579.69	579.96	579.93	580.00
EW-10	587.77	570.82	572.32	579.62	579.89	580.03	579.94	580.50	580.44	580.38
EW-11	591.51	571.91	572.56	576.6 (1)	576.96 (1)	577.03 (1)	576.99 (1)	578.83 (1)	578.84 (1)	578.79 (1)
EW-12	586.42	571.57	573.07	578.97 (1)	579.43 (1)	579.71 (1)	579.15 (1)	578.49 (1)	578.94 (1)	578.85 (1)
Crotty Street Channel Containment Area										
EW-13	584.33	571.86	NA	579.84	580.29	580.81	580.09	581.20	579.74	580.60
EW-14	582.42	569.92	NA	579.59	579.36	580.56	579.85	580.49	579.54	580.43
EW-15	583.71	571.61	NA	581.44	(2)	581.18	578.92	(2)	--	(2)
Saginaw River										
SG-1	587.16	NA	NA	--	580.14	579.87	580.20	579.53	580.71	580.81

Notes:

-- No Level recorded
(1) Product identified in well
(2) Well flooded

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. 30, 2018	Water Elevation (ft AMSL) Sept. 26, 2018	Water Elevation (ft AMSL) Oct. 22, 2018	Water Elevation (ft AMSL) Nov. 29, 2018	Water Elevation (ft AMSL) Dec. 12, 2018	Water Elevation (ft AMSL) Dec. 19, 2018
Machine Storage Area									
EW-6	589.74	570.39	572.39	578.09 (1)	578.15 (1)	578.07 (1)	578.08 (1)	578.11 (1)	578.11 (1)
EW-7	587.99	571.14	571.64	578.58	578.52	578.55	578.57	578.61	578.63
EW-8	588.34	572.29	573.29	578.96 (1)	579.08 (1)	578.96 (1)	578.97 (1)	579.07 (1)	579.07 (1)
EW-9	588.04	572.19	573.69	579.98	580.14	579.99	579.87	579.94	579.93
EW-10	587.77	570.82	572.32	580.22	580.40	580.20	580.06	580.20	580.20
EW-11	591.51	571.91	572.56	576.80 (1)	576.73 (1)	578.76 (1)	578.80 (1)	578.93 (1)	578.93 (1)
EW-12	586.42	571.57	573.07	578.98 (1)	578.95 (1)	578.87 (1)	579.06 (1)	579.43 (1)	579.43 (1)
Crotty Street Channel Containment Area									
EW-13	584.33	571.86	NA	580.82	580.72	580.8	581.30	581.04	581.25
EW-14	582.42	569.92	NA	580.35	580.51	580.61	581.03	581.03	581.04
EW-15	583.71	571.61	NA	585.71	579.83	580.97	582.50	580.83	581.21
Saginaw River									
SG-1	587.16	NA	NA	581.12	580.42	580.2	--	--	580.05

Notes:

-- No Level recorded
(1) Product identified in well
(2) Well flooded

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)										
							12/19/2018	8/23/2017	12/8/2016	8/24/2015	8/6/2014	8/6/2013	8/7/2012	8/22/2011	8/16/2010	8/27/2009	8/19/2008
Machine Storage Area (MSA)																	
LMW13S	589.40	19.22	10	SS	PVC	2	580.46	580.72	580.01	580.10	579.43	578.61	578.19	578.03	578.71	579.31	578.21
LMW17S	589.31	19.83	10	SS	PVC	2	579.13	579.17	578.79	579.13	578.96	578.87	578.85	578.80	578.83	578.81	578.58
LMW18S	592.33	22.52	10	SS	PVC	2	578.64	578.48	578.17	578.62	578.27	577.93	577.82	577.61	577.66	577.99	577.62
LMW19S	588.61	19.32	10	SS	PVC	2	579.10	578.99	578.91	579.55	579.32	578.44	578.58	578.34	578.25	578.53	578.45
MW1S	591.08	12.95	2	SS	SS	2	578.79	578.76	578.77	578.73	578.71	578.80	578.65	578.65	578.68	579.71	580.93
MW100S	591.97	14.44	10	SS	SS	2	580.58	580.69	579.80	580.19	579.32	578.81	578.49	578.18	578.86	579.27	578.40
MW101S	593.34	19.22	10	SS	SS	2	579.44	578.99	579.17	579.12	579.01	579.10	578.94	578.80	578.93	578.78	578.49
MW102D1	594.86	30.99	10	SS	SS	2	580.18	580.86	579.30	579.88	579.39	578.34	577.90	578.71	578.39	579.42	578.83
MW102D2	594.93	36.21	10	SS	SS	2	580.15	580.85	579.37	579.86	579.38	578.31	577.89	578.69	578.37	579.40	578.93
MW102D3	594.91	46.74	10	SS	SS	2	580.15	580.78	579.25	579.83	579.35	578.27	577.84	578.67	579.34	579.41	578.89
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	580.08	580.74	579.19	579.77	579.30	578.24	577.79	578.63	578.29	579.33	578.76
MW300S	587.12	15.06	10	SS	SS	2	580.86	579.97	577.19	577.90	577.03	577.17	577.69	577.03	577.18	578.22	579.26
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	580.54	580.69	579.63	580.02	579.22	578.55	578.14	577.47	578.60	579.19	577.96
Perimeter Banks (PB)																	
LMW15D	588.34	32..8	10	SS	PVC	2	580.16	580.93	579.16	579.68	579.37	578.02	577.56	578.65	578.21	579.45	578.12
MW301D1	589.54	27.50	10	SS	SS	2	578.51	579.24	577.60	578.15	577.70	576.56	578.38	579.39	578.96	579.96	579.03
MW301D2	589.16	37.24	10	SS	SS	2	578.56	579.31	577.67	578.22	577.78	576.62	577.99	579.00	578.60	579.56	578.64
MW301D3	589.22	44.04	10	SS	SS	2	578.43	579.17	577.53	578.06	577.64	576.46	577.87	578.87	578.47	579.44	578.41
MW301D4	589.33	55.95	10	SS	SS	2	578.52	579.25	577.61	578.14	577.96	576.54	578.15	579.16	578.74	579.70	578.75
Support Facilities Area (SFA)																	
MSA5S	588.60	18.98			SS	2	588.60	579.97	579.91	580.26	579.67	580.22	578.58	578.67	579.10	580.10	578.04
Crotty Street Channel																	
MW1-00	588.26	12.00	7	SS	SS	2	580.55	579.67	579.16	579.79	579.35	577.71	576.44	577.17	577.13	578.95	578.74
MW2-00	589.29	18.00	7	SS	SS	2	580.65	581.58	578.84	579.35	578.75	577.79	576.62	577.29	577.26	578.40	578.83
MW3-00	588.40	12.50	7	SS	SS	2	580.48	580.60	579.15	579.76	579.38	577.67	576.47	577.25	577.14	579.01	578.74
MW4-00	589.65	19.00	7	SS	SS	2	580.81	580.87	579.03	579.54	578.91	577.90	576.76	577.41	577.38	578.55	578.95
MW5-00	588.89	13.00	7	SS	SS	2	581.31	580.15	577.22	577.70	576.99	577.00	576.73	576.77	576.95	578.04	578.82
SG-1	580.00	- -	- -	- -	- -	- -	580.05	n/a	n/a	n/a	581.06	n/a	n/a	n/a	n/a	n/a	578.55
Saginaw River Elevation [6]							n/a	580.79	579.07	579.66	579.32	577.02	576.71	577.53	577.41	578.34	577.97

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 the 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)												
							8/20/2007	8/16/2006	8/29/2005	8/24/2004	7/28/2003	8/26/2002	8/13/2001	3/19/2001	2/23/2001	1/24/2001	12/15/2000	11/30/2000	10/31/2000
Machine Storage Area (MSA)																			
LMW13S	589.40	19.22	10	SS	PVC	2	577.67	578.23	578.14	579.40	578.45	582.05	578.68	577.85	578.17	578.19	578.06	578.35	578.63
LMW17S	589.31	19.83	10	SS	PVC	2	577.58	578.63	578.31	578.80	582.73	578.91	578.68	578.74	578.83	579.06	578.79	579.17	578.93
LMW18S	592.33	22.52	10	SS	PVC	2	578.13	578.00	578.23	578.45	578.35	578.85	578.10	578.22	578.61	578.39	578.18	578.29	578.52
LMW19S	588.61	19.32	10	SS	PVC	2	579.71	578.45	578.85	579.21	579.24	579.93	578.79	579.56	579.96	579.59	(5)	579.56	579.38
MW1S	591.08	12.95	2	SS	SS	2	578.48	n/a	577.58	578.63	578.56	578.48	578.51	578.41	(5)	578.44	578.36	578.40	578.57
MW100S	591.97	14.44	10	SS	SS	2	578.01	578.38	578.57	579.15	577.27	578.91	578.93	578.36	578.64	578.87	578.65	579.05	579.33
MW101S	593.34	19.22	10	SS	SS	2	578.39	578.31	577.95	578.82	578.87	579.12	578.76	578.84	578.96	579.18	578.84	579.03	578.91
MW102D1	594.86	30.99	10	SS	SS	2	578.04	578.30	578.30	579.02	578.25	578.98	578.18	577.61	577.40	577.47	577.62	577.67	577.87
MW102D2	594.93	36.21	10	SS	SS	2	578.03	578.25	578.33	579.01	578.24	578.95	578.15	577.60	577.39	577.45	577.61	577.65	577.85
MW102D3	594.91	46.74	10	SS	SS	2	577.98	578.25	578.31	578.98	578.20	578.93	578.11	577.56	577.34	577.40	577.56	577.60	577.80
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	577.98	578.22	578.25	578.94	578.16	578.86	578.03	577.49	577.27	577.33	577.47	577.53	577.73
MW300S	587.12	15.06	10	SS	SS	2	576.30	576.81	578.34	577.05	577.77	578.53	577.00	578.84	578.67	578.99	578.07	578.84	578.27
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	576.98	577.97	577.50	576.94	578.13	578.45	578.23	577.38	577.77	577.88	577.54	578.04	578.13
Perimeter Banks (PB)																			
LMW15D	588.34	32..8	10	SS	PVC	2	577.89	578.22	578.24	579.34	578.04	578.83	578.06	577.37	577.12	577.22	577.33	577.48	577.63
MW301D1	589.54	27.50	10	SS	SS	2	578.72	578.94	579.05	580.02	578.90	579.66	578.89	578.28	578.03	578.09	578.25	578.34	(5)
MW301D2	589.16	37.24	10	SS	SS	2	578.33	578.55	578.62	579.59	578.49	579.25	578.48	577.86	577.62	577.67	577.81	577.92	(5)
MW301D3	589.22	44.04	10	SS	SS	2	578.20	578.44	578.52	579.47	578.36	579.10	578.53	577.72	577.59	577.52	577.67	577.78	(5)
MW301D4	589.33	55.95	10	SS	SS	2	578.48	578.69	578.80	579.71	578.57	579.28	578.48	577.86	577.63	577.68	577.82	577.93	(5)
Support Facilities Area (SFA)																			
MSA5S	588.60	18.98			SS	2	580.10	579.28	579.76	580.57	580.55	580.65	579.74	580.65	580.42	580.62	580.46	580.65	580.34
Crotty Street Channel																			
MW1-00	588.26	12.00	7	SS	SS	2	577.11	576.92	577.09	578.37	577.78	578.44	576.72	578.61	578.14	577.81	577.49	577.75	577.45
MW2-00	589.29	18.00	7	SS	SS	2	577.09	576.97	577.23	577.50	577.60	578.03	576.76	578.69	578.26	577.82	577.51	577.77	577.45
MW3-00	588.40	12.50	7	SS	SS	2	577.19	576.94	577.13	578.51	577.77	578.38	576.70	578.62	578.26	577.79	577.48	577.74	577.45
MW4-00	589.65	19.00	7	SS	SS	2	577.21	577.07	577.34	577.59	577.68	578.07	576.79	578.67	578.30	577.84	577.51	577.78	577.47
MW5-00	588.89	13.00	7	SS	SS	2	576.55	576.72	577.85	576.91	576.28	576.72	577.02	577.06	577.86	576.97	576.91	576.90	577.31
SG-1	580.00	- -	- -	- -	- -	- -	577.83	578.33	578.43	579.63	577.93	578.73	578.12	(5)	(5)	(5)	(5)	577.33	577.43
Saginaw River Elevation [6]							577.09	577.41	578.32	578.52	576.83	578.50	577.91	576.80	576.74	576.77	576.78	577.02	577.23

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 the 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) 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	1/4/2000	11/24/1999	10/25/1999	9/27/1999
Machine Storage Area (MSA)																			
LMW13S	589.40	19.22	10	SS	PVC	2	578.90	578.90	580.11	580.62	581.63	581.81	581.27	581.74	579.27	580.08	580.68	581.26	580.55
LMW17S	589.31	19.83	10	SS	PVC	2	579.24	579.20	579.09	579.85	580.06	580.19	579.91	579.96	579.08	579.47	579.71	579.69	578.98
LMW18S	592.33	22.52	10	SS	PVC	2	578.67	579.03	578.52	577.80	578.10	578.09	577.66	577.80	577.09	577.37	577.32	577.62	577.51
LMW19S	588.61	19.32	10	SS	PVC	2	579.34	580.13	579.45	580.56	580.96	581.25	580.73	581.39	579.70	580.30	579.58	579.95	579.53
MW1S	591.08	12.95	2	SS	SS	2	578.43	578.38	578.34	579.31	579.26	579.29	579.28	579.18	579.05	579.07	579.15	579.11	578.51
MW100S	591.97	14.44	10	SS	SS	2	579.57	579.66	579.85	578.03	577.79	577.07	576.87	576.69	577.09	577.49	578.09	578.77	578.57
MW101S	593.34	19.22	10	SS	SS	2	578.99	579.04	579.02	580.22	580.39	580.14	579.21	579.86	579.61	579.61	579.65	579.81	579.04
MW102D1	594.86	30.99	10	SS	SS	2	578.16	578.15	578.71	577.62	577.70	577.60	577.25	577.23	576.81	576.80	576.38	577.47	577.64
MW102D2	594.93	36.21	10	SS	SS	2	578.13	578.13	578.67	577.48	577.58	577.44	577.12	577.08	576.80	576.67	576.24	577.33	577.50
MW102D3	594.91	46.74	10	SS	SS	2	578.08	578.09	578.63	577.52	577.59	577.47	577.16	577.12	576.88	576.71	576.26	577.35	577.55
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	578.00	578.02	578.55	577.38	577.45	577.34	577.01	576.98	575.70	576.56	576.12	577.21	577.40
MW300S	587.12	15.06	10	SS	SS	2	578.16	578.24	n/a (2)	n/a (4)	579.89	580.18	579.73	No Access	578.55	579.27	579.91	578.87	578.90
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	578.16	578.21	579.19	579.32	579.22	578.91	578.99	578.55	578.58	Damaged	Damaged	578.58	578.30
Perimeter Banks (PB)																			
LMW15D	588.34	32..8	10	SS	PVC	2	577.94	578.03	578.43	n/a (4)	578.88	578.74	578.56	578.56	578.23	577.95	577.18	578.49	578.93
MW301D1	589.54	27.50	10	SS	SS	2	(5)	578.88	578.65	579.37	578.80	578.85	578.59	578.56	578.28	578.05	577.42	578.63	578.99
MW301D2	589.16	37.24	10	SS	SS	2	(5)	578.47	578.56	578.80	578.89	578.77	578.54	578.51	578.22	577.99	577.35	578.57	578.93
MW301D3	589.22	44.04	10	SS	SS	2	(5)	578.32	578.56	578.80	578.85	578.74	578.49	578.48	578.18	577.96	577.32	578.54	578.90
MW301D4	589.33	55.95	10	SS	SS	2	(5)	578.48	578.48	578.78	578.76	578.69	578.45	578.43	578.14	577.90	577.27	578.47	578.85
Support Facilities Area (SFA)																			
MSA5S	588.60	18.98			SS	2	580.56	580.41	581.32	581.17	582.22	582.37	580.62	582.13	580.96	581.42	581.70	581.77	581.74
Crotty Street Channel																			
MW1-00	588.26	12.00	7	SS	SS	2	577.36	577.60	577.71	579.57	578.68	578.42	578.04	578.89	577.89	n/a	n/a	n/a	n/a
MW2-00	589.29	18.00	7	SS	SS	2	577.36	577.59	577.65	578.67	Not Accessible	577.65	577.26	578.11	579.11	n/a	n/a	n/a	n/a
MW3-00	588.40	12.50	7	SS	SS	2	577.37	577.60	578.68	578.46	579.05	578.79	578.40	579.25	578.27	n/a	n/a	n/a	n/a
MW4-00	589.65	19.00	7	SS	SS	2	577.34	577.57	577.62	578.87	Not Accessible	577.60	577.18	578.03	577.03	n/a	n/a	n/a	n/a
MW5-00	588.89	13.00	7	SS	SS	2	577.91	578.01	n/a (4)	n/a (4)	579.12	578.86	578.66	578.36	577.63	n/a	n/a	n/a	n/a
SG-1	580.00	- -	- -	- -	- -	- -	577.93	578.05	Destroyed (3)	Destroyed (3)	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation [6]							577.49	577.76	578.27	577.81	577.48	577.42	577.37	577.24	577.14	577.15	576.54	577.35	578.04

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 the 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) 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	580.02	579.68	579.23	581.42	582.65	583.17	582.56
LMW17S	589.31	19.83	10	SS	PVC	2	579.19	579.43	579.65	579.77	580.25	581.57	581.58
LMW18S	592.33	22.52	10	SS	PVC	2	577.89	579.57	579.45	579.39	579.78	579.44	579.44
LMW19S	588.61	19.32	10	SS	PVC	2	580.01	580.42	580.52	580.51	580.94	580.90	580.66
MW1S	591.08	12.95	2	SS	SS	2	578.58	--	578.64	579.29	579.49	584.35	584.12
MW100S	591.97	14.44	10	SS	SS	2	--	579.33	579.07	579.30	579.96	582.53	582.71
MW101S	593.34	19.22	10	SS	SS	2	579.18	578.83	578.71	579.19	580.44	586.50	586.44
MW102D1	594.86	30.99	10	SS	SS	2	578.29	579.69	576.82	579.27	579.34	582.38	582.32
MW102D2	594.93	36.21	10	SS	SS	2	578.15	579.68	576.78	579.34	579.39	582.03	581.93
MW102D3	594.91	46.74	10	SS	SS	2	578.20	579.66	576.80	579.25	579.35	581.92	581.84
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	578.05	579.56	576.70	579.13	579.21	581.54	581.45
MW300S	587.12	15.06	10	SS	SS	2	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	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	579.81	579.68	577.88	579.21	579.23	579.86	579.71
MW301D1	589.54	27.50	10	SS	SS	2	579.67	579.73	575.75	579.22	579.32	579.40	579.29
MW301D2	589.16	37.24	10	SS	SS	2	579.62	579.69	576.11	579.19	579.28	579.35	579.23
MW301D3	589.22	44.04	10	SS	SS	2	579.59	579.65	576.13	579.18	579.25	579.38	579.23
MW301D4	589.33	55.95	10	SS	SS	2	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	581.84	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
MW2-00	589.29	18.00	7	SS	SS	2	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
MW4-00	589.65	19.00	7	SS	SS	2	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
SG-1	580.00	- -	- -	- -	- -	- -	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation [6]							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 the 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**	**effluent-GWTS**
Sample ID:			**WT-12610-113017-SSH-02-17**	**W-12610-060118-SSH-18101**	**W-12610-060118-SSH-18102**
Sample Date:			**11/30/2017**	**6/1/2018**	**6/1/2018 Duplicate**
Parameters	**Units**	**Daily Maximum[(1)]**			
VOAs					
Vinyl chloride	mg/L	0.002	0.001 U	0.001 U	0.001 U
Metals					
Cadmium	mg/L	0.057	0.002 U	0.002 U	0.002 U
Chromium	mg/L	6.812	0.005 U J	0.00083 J	0.0011 J
Copper	mg/L	1.476	0.02 U	0.02 U	0.02 U
Iron	mg/L	--	0.4	0.043 J	0.045 J
Lead	mg/L	0.632	0.003 U	0.003 U	0.003 U
Mercury	mg/L	ND	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	2.548	0.074	0.043	0.043
Silver	mg/L	0.2	0.005 U	0.005 U	0.005 U
Pesticides					
Aroclor-1016 (PCB-1016)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Aroclor-1254 (PCB-1254)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	ND	0.000096 U	0.000097 U	0.000097 U
Wet					
Ammonia	mg/L	30	0.2	0.3	0.28
Biochemical oxygen demand (BOD)	mg/L	835	2.0 U	2.0 U	2.0 U
Chemical oxygen demand (COD)	mg/L	1670	13	10 U	10 U
Oil and grease (HEM), polar	mg/L	100	4.7 U	4.8 U	4.9 U
pH, lab	s.u.	6.5 to 11.0	7.2 HF	7.6 HF	7.6 HF
Phosphorus	mg/L	13.8	0.10 U	0.10 U	0.10 U
Total suspended solids (TSS)	mg/L	1336	4.0 U	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.

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**	**Influent**
Sample ID:			**GW-12610-043018-SSH-0118**	**GW-12610A-082018-SSH-18109**
Sample Date:			**4/30/2018**	**8/20/2018**
Parameters:	**Units**	**Michigan Residential Drinking water criteria[(1)]**		
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.00095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.00095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.00095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	**0.0013**	**0.0025**
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.00095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.00095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.00095 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	Perimeter Banks
Sample Location:			MW102D1	MW102D2	MW102D4	MW300S	LMW13S
Sample ID:			GW-12610A-082118-SSH-18111	GW-12610A-082118-SSH-18110	GW-12610A-082018-SSH-18108	GW-12610A-082018-SSH-18107	GW-12610A-082018-SSH-18103
Sample Date:			08/21/2018	08/21/2018	08/20/2018	08/20/2018	08/20/2018
Parameters:	**Units**	**Michigan Residential Drinking water criteria[1]**					
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00032	0.00019 U	0.00019 U	0.00019 U	**0.00056**
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U

Notes:

J Estimated concentration.
U Not present at or above the associated value.
R Rejected
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**
Sample Location:			**LMW15D**	**LMW15D**	**MW301D2**
Sample ID:			**GW-12610A-082018-SSH-18104**	**GW-12610A-082018-SSH-18105**	**GW-12610A-082018-SSH-18106**
Sample Date:			**08/20/2018**	**08/20/2018**	**08/20/2018**
				Duplicate	
Parameters:	**Units**	**Michigan Residential Drinking water criteria[(1)]**			
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00021	0.00019 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U

Notes:

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

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 2017-2019		
		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)	- -	- -	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, chromium, copper, mercury, lead, nickel, silver, ammonia-nitrogen, PCBs, and vinyl chloride

Attachment A
Maintenance Activity Checklist

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 11/30/17

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: mostly clouds, wind 10-15

Temperature: low 40s

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

- [Y] Forcemain tubing requires replacement? only tubing in pumpheads

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	11.88	N	Y	LNAPL present
EW-8	11.34	9.31	N	Y	LNAPL present
EW-12	9.42	7.09	N	Y	LNAPL present
EW-15	6.71	2.79	Y 25%	N (requires repair)	

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	8.16	7.57	13.46/15.22	3.44	1.73

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	none
[X] Check Bag filters	changed 11/13
[X] check GACs for leaks	none
[X] Check PLC	OK
[X] check aerator	installed repaired
[X] check sludge pump	OK - run when onsite
[X] check inspection drum	Fe bacteria
[X] check aeration tank	
[X] check settling chamber	
[X] check clear well	float requires adjustment
[X] check floats in clearwell	

	Comments
[X] check feed pump	95%
Flow Reading	1.25 (gpm) *
Totalized Flow Reading	73,707 (gal)
[X] heater on?	Yes
[X] check sludge tank	
sludge thickness	less than 2 (in)

Collect Samples

	Date Initials Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-	
[X] Sample Groundwater Treatment System effluent	W-12610-113017-SSH-02-17	1400

Notes

levels high due to recent rains - flooding EW15

* bucket test

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION **Project: 12610**

On-Site Personnel: Steve Hoevemeyer

Completed Date: 12/22/17

Completed By: SH

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [X] Other task: heater in EW15

Weather: light snow, wind 25

Temperature: high 20s

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

[Y] Forcemain tubing requires replacement? Change about every 2 weeks

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	11.88	N	Y	thick NAPL layer
EW-8	11.34	9.39	N	Y	" " "
EW-12	9.42	7.31	N	N	" " "
EW-15	6.71	flooded 3-4" of water on floor			

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		Comments
[X] Check piping for leaks	bldg. down	[X] check feed pump	bldg. down
[X] Check Bag filters	OK	Flow Reading	(gpm)
[X] check GACs for leaks	none	Totalized Flow Reading	(gal)
[X] Check PLC	OK	[X] heater on?	yes
[X] check aerator	OK	[ ] check sludge tank	
[X] check sludge pump	run when onsite	sludge thickness	(in)
[X] check inspection drum	signs of iron bacteria		
[X] check aeration tank	OK		
[X] check settling chamber	OK		
[X] check clear well	OK		
[X] check floats in clearwell	require adjustment		

Collect Samples

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

Notes

Had electrician scheduled but had to cancel due to flooding of EW15 → repair heater

SH

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 1/29/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: snow, wind ~10-15

Temperature: low 20s

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

Y Forcemain tubing requires replacement? change as necessary

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	11.97	N	Y	thick LNAPL
EW-8	11.34	9.55	N	Y	thick LNAPL
EW-12	9.42	7.45	N	Y	thick LNAPL
EW-15	6.71	2.27	Y	Y	water fairly high

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	9.48	8.69	8.15	13.66/14.91	4.49	2.83

4. GROUNDWATER TREATMENT SYSTEM

	Comments
☑ Check piping for leaks	none
☑ Check Bag filters	OK
☑ check GACs for leaks	none
☑ Check PLC	OK
☑ check aerator	OK
☑ check sludge pump	OK
☑ check inspection drum	iron bacteria foam
☑ check aeration tank	OK
☑ check settling chamber	OK
☑ check clear well	OK
☐ check floats in clearwell	1 float somewhat loose

	Comments
☑ check feed pump	95%
Flow Reading	(gpm)
Totalized Flow Reading	(gal)
☑ heater on?	yes
☑ check sludge tank	
sludge thickness	≈ few (in)

Collect Samples

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

Notes

high feed tank alarm response

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 2/27/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: Sun, wind ~10 mph

Temperature: low 40s

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

Y Forcemain tubing requires replacement? approx. every 2/3 weeks

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	11.94	N	Y	thick LNAPL
EW-8	11.34	9.39	N	Y	thick LNAPL
EW-12	9.42	6.99	N	Y	thick LNAPL
EW-15	6.71	flooded 20%	Y/N		

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14	river
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42	7.02
DTW	9.37	8.07	7.88	12.59/14.55	4.04	3.06	

4. GROUNDWATER TREATMENT SYSTEM

	Comments
☑ Check piping for leaks	none
☑ Check Bag filters	OK - psi < 5
☑ check GACs for leaks	OK
☑ Check PLC	OK
☑ check aerator	OK
☑ check sludge pump	OK
☑ check inspection drum	iron bacteria buildup
☑ check aeration tank	OK
☑ check settling chamber	OK
☑ check clear well	OK
☑ check floats in clearwell	somewhat loose

	Comments
☐ check feed pump	95%
Flow Reading	(gpm)
Totalized Flow Reading	(gal)
☑ heater on?	Y
☑ check sludge tank	OK
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

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 3/29/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: cloudy, chance rain

Temperature: high 30s

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
N	Exposure Barrier (signs of trespassing, impairment of pavement)	
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile
Y	Containment System (signs of deterioration of sheet pile, leaking)	check tie rods after thaw

3. GROUNDWATER EXTRACTION SYSTEM

Y Forcemain tubing requires replacement? as necessary

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	11.93	Y - 75%	Y	thick LNAPL
EW-8	11.34	9.29	N	Y	thick LNAPL
EW-12	9.42	6.71	Y - 90%	Y	thick LNAPL
EW-15	6.71	2.53	Y - 30%	Y	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14	river
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42	
DTW	9.36	8.25	7.74	12.66/14.48	3.52	1.86	7.29'

4. GROUNDWATER TREATMENT SYSTEM

	Comments
☑ Check piping for leaks	none
☑ Check Bag filters	OK
☑ check GACs for leaks	#2 2.5 psi
☑ Check PLC	OK
☑ check aerator	OK
☑ check sludge pump	OK
☑ check inspection drum	iron bacteria
☑ check aeration tank	OK
☑ check settling chamber	OK
☑ check clear well	OK
☑ check floats in clearwell	1 appears loose but OK

	Comments
☑ check feed pump	95%
Flow Reading	0.7 (gpm)
Totalized Flow Reading	11,243 (gal)
☑ heater on?	Y
☑ check sludge tank	OK
sludge thickness	few (in)

Collect Samples

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

Notes

☑ leaking at seam of drum

New flowmeter

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 4/30/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: sun wind 2-5

Temperature: 50s'

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
N	Exposure Barrier (signs of trespassing, impairment of pavement)	SSI onsite to survey recently
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks on cap

3. GROUNDWATER EXTRACTION SYSTEM

- [Y] Forcemain tubing requires replacement? as necessary

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	11.29	Y-75%	N	thick LNAPL
EW-8	11.34	9.27	N	N	
EW-12	9.42	7.27	Y-90%	N	LNAPL
EW-15	6.71	4.79	Y-42.5	N	

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14	river
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42	587.16'
DTW	9.41	8.35	7.83	12.59/14.52	4.24	2.57	6.96

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	OK
[X] Check Bag filters	OK
[X] check GACs for leaks	#2 drum at seam
[X] Check PLC	OK
[X] check aerator	OK
[X] check sludge pump	OK
[X] check inspection drum	iron bacteria
[X] check aeration tank	OK
[X] check settling chamber	OK - some iron bacteria
[X] check clear well	OK
[X] check floats in clearwell	1 loose

	Comments
[X] check feed pump	95%
Flow Reading – filling FEED TANK	0.0 (gpm)
Totalized Flow Reading	18,529 (gal)
[X] heater on?	only in bldg
[X] check sludge tank	OK
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

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Completed Date: 5/31/18

On-Site Personnel: Steve Hoevemeyer

Completed By: SH

1. DETAILS OF INSPECTION

Weather: cloudy, wind ~10

Temperature: 70s

- [X] Routine Monthly Inspection
- [X] Response to Alarm (list type and/or PLC outputs)
- [X] Other task: set 24hr composite sample for annual discharge

If yes indicate nature of maintenance/repairs required

2. SITE INSPECTION

(Y/N)		Comments
N	Exposure Barrier (signs of trespassing, impairment of pavement)	
Y	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion + some animal signs
Y	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks on cap of sheetpile

3. GROUNDWATER EXTRACTION SYSTEM

- [Y] Forcemain tubing requires replacement? as necessary

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	11.83	N	N	LNAPL
EW-8	11.34	9.19	N	N	drops of LNAPL on probe
EW-12	9.42	7.93	N	N	LNAPL
EW-15	6.71	flooded 4-35%	N		

EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14	river
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42	
DTW	9.37	8.08	7.27	12.68 LNAPL	3.13	1.97	7.63

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[X] Check piping for leaks	none
[X] Check Bag filters	4.5 psi - OK
[X] check GACs for leaks	#2 epoxy seam
[X] Check PLC	OK
[X] check aerator	OK
[X] check sludge pump	OK
[X] check inspection drum	iron bacteria
[X] check aeration tank	OK
[X] check settling chamber	OK
[X] check clear well	OK
[X] check floats in clearwell	1 loose

	Comments
[ ] check feed pump	95%
Flow Reading	0.9 (gpm)
Totalized Flow Reading	20,490 (gal)
[X] heater on?	only in bldg
[ ] check sludge tank	OK
sludge thickness	~ few (in)
outlet psi	2.25

Collect Samples

	Date Initials Sample Numbe	Time
[ ] Sample Groundwater Treatment System Influent	W-12610-	
[ ] Sample Groundwater Treatment System effluent	W-12610- 060118 - SSH - 1B101	

Notes: high fuel tank alarm

JS, 1/10/19

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 6/20/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: light rain, wind 25

Temperature: low 70s

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

- [Y] Forcemain tubing requires replacement? as necessary

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	11.79	N	N	thick LNAPL drops
EW-8	11.34	9.39	N	N	thick LNAPL drops
EW-12	9.42	7.48	N	N	LNAPL
EW-15	6.71	4.14	Y	~~Y~~ to N	32.5%

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	8.11	7.33	12.67 LNAPL	4.59	2.88

4. GROUNDWATER TREATMENT SYSTEM

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

	Comments
[ ] check feed pump	100%
Flow Reading	0.4 (gpm)
Totalized Flow Reading	35,274 (gal)
[ ] heater on?	
[X] check sludge tank	full of H_2O
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 level 580.77'

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 7/30/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: sun, 70s

Temperature: wind ≈10 mph

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
N	Exposure Barrier (signs of trespassing, impairment of pavement)	no excavations
N	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion
N	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks 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	11.74	N	N	thick LNAPL
EW-8	11.34	9.29	N	N	drops of LNAPL
EW-12	9.42	7.57	N	N	thick LNAPL
EW-15	6.71	3.85	Y-35%	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	9.40	8.04	7.39	12.72 (LNAPL)	3.73	1.99

4. GROUNDWATER TREATMENT SYSTEM

	Comments
[x] Check piping for leaks	OK
[x] Check Bag filters	OK
[ ] check GACs for leaks	GAC #1 is leaking
[x] Check PLC	OK
[x] check aerator	OK
[x] check sludge pump	OK
[x] check inspection drum	OK - iron bacteria
[x] check aeration tank	"
[x] check settling chamber	"
[x] check clear well	"minor"
[x] check floats in clearwell	some problems sticking" at times

	Comments
[x] check feed pump	95 %
Flow Reading	0 (gpm)
Totalized Flow Reading	52454 (gal)
[x] heater on?	no
[x] check sludge tank	
sludge thickness	few (in)

Collect Samples

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

Notes

river level 587.16 − 6.35 = 580.81'

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION — **Project: 12610**

On-Site Personnel: Steve Hoevemeyer

Completed Date: 8/30/18

Completed By: SH

Weather: rain/sun - on/off

Temperature: 70s

1. DETAILS OF INSPECTION

- [X] Routine Monthly Inspection
- [X] Response to Alarm (list type and/or PLC outputs)
- [X] Other task: annual GW sampling 8/20-21

2. SITE INSPECTION

(Y/N)		If yes indicate nature of maintenance/repairs required
N	Exposure Barrier (signs of trespassing, impairment of pavement)	no excavations
N	Multi-layer Cap (evidence of settlement, erosion, disturbance)	minor erosion along sheetpile
N	Containment System (signs of deterioration of sheet pile, leaking)	minor cracks on cap
N	Monitoring wells (sign of damage)	
N	Crotty Street Sewer (check level for potential flooding)	
	Permanent Markers (signs of damage/visibility issues)	not yet installed
N	Storm Water sewer network (signs of debris/silt/damage in CBs and outlets)	OK

3. GROUNDWATER EXTRACTION SYSTEM

- [ ] Forcemain tubing requires replacement? — as necessary
- [N] Are the EW vaults deteriorating (structure, lids, piping)?

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	11.65	N	N	LNAPL on probe
EW-8	11.34	9.38	N	N	LNAPL on probe
EW-12	9.42	7.44	N	N	LNAPL on probe
EW-15	6.71	32.5% speed	but vault is	flooded	

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	9.41	8.06	7.55	12.77/14.71	3.51	2.07

4. GROUNDWATER TREATMENT SYSTEM

	Comments
☑ Check piping for leaks	OK
☑ Check PLC	OK
☑ check sludge pump	OK
☑ check inspection drum	OK - Fe bacteria
☑ check aeration tank	OK
☑ check settling chamber	OK
☑ check clear well	OK
☑ check floats in clearwell	minor issues
☑ check inlet air filter - blower	OK
☑ check aerator (clean every 6-months)	has been rebuilt
Pressure reading (PSI) Normal Range (4 to 9 PSI)	A1 5

	Comments
☐ check feed pump (calib. every 6-mon)	(include date of last calib.)
Flow Reading	0.3 (gpm)
Totalized Flow Reading	53199 (gal)
☑ check sludge tank	
Sludge thickness	2-3 (in)
☑ check bag filters	5 psi
Pressure reading (PSI) Normal Range (5 to 25 PSI)	BF1 ____ BF2 ____ BF3 ____
☑ check GACs for leaks	#1
Pressure reading (PSI) Normal Range (4 to 6 PSI)	GAC1 4 GAC2 4
☑ check heater	

Collect Samples

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

Notes

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION **Project: 12610**

On-Site Personnel: Steve Hoevemeyer

Completed Date: 9/26/18

Completed By: SH SH

1. DETAILS OF INSPECTION

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

Weather: mostly sun wind ≈ 5

Temperature: 50's

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

Y Forcemain tubing requires replacement? as necessary

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	11.59	N	N	thick LNAPL
EW-8	11.34	9.26	N	N	drops of LNAPL
EW-12	9.42	7.47	N	N	LNAPL
EW-15	6.71	3.88	20%	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	9.47	7.90	7.37	12.81/14.78	3.61	1.91

4. GROUNDWATER TREATMENT SYSTEM

	Comments
☑ Check piping for leaks	OK
☑ Check Bag filters	new 9/18
☑ check GACs for leaks	new 9/18
☑ Check PLC	OK
☑ check aerator	cleaned diffusers
☑ check sludge pump	not pumping right
☑ check inspection drum	iron bacteria foam
☑ check aeration tank	OK - some solids on bottom ≈ 1"
☑ check settling chamber	OK
☑ check clear well	
☑ check floats in clearwell	

	Comments
☑ check feed pump	100%
Flow Reading	0.7 (gpm)
Totalized Flow Reading	59,303 (gal)
☑ heater on?	no
☑ check sludge tank	
sludge thickness	2-3 (in)

Collect Samples

	Date Initials Sample Numbe	Time
☐ Sample Groundwater Treatment System Influent	W-12610- 0	
☐ Sample Groundwater Treatment System effluent	W-12610-	

Notes

river level 587.16 - 6.74 = 580.42'

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 10/22/18

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather: part sun, windy

Temperature: high 30s

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

- [Y] Forcemain tubing requires replacement? as necessary

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	11.67	N	N	thick LNAPL
EW-8	11.34	9.30	N	N	drops of LNAPL
EW-12	9.42	7.55	N	N	thick LNAPL
EW-15	6.71	2.74	30%	N	OK

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	9.44	8.05	7.57	12.75 (LNAPL)	3.53	1.81

4. GROUNDWATER TREATMENT SYSTEM

	Comments		Comments
[X] Check piping for leaks	OK	[X] check feed pump	100%
[X] Check Bag filters	OK	Flow Reading	(gpm)
[X] check GACs for leaks	OK	Totalized Flow Reading	(gal)
[X] Check PLC	OK	[X] heater on?	N
[X] check aerator	OK	[X] check sludge tank	full of H_2O
[X] check sludge pump	OK	sludge thickness	2-3 (in)
[X] check inspection drum	OK		
[X] check aeration tank	OK		
[X] check settling chamber	OK		
[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

river level 587.16 − 6.96 = 580.20

Attachment B
Analytical Results Summary (2009 to 2018)

Attachment B

Analytical Results Summary Sampling
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**	**influent-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-12610-022614-SSH-1402**
Sample Date:			**2/12/2014**	**2/26/2014**	**9/5/2014**	**3/16/2015**	**12/10/2015**	**5/9/2016**	**6/14/2016**	**1/16/2017**	**5/9/2017**	**11/30/2017**	**2/26/2014**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**											
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	-
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	-
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	-
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	-
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	-
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	-
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	-
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	33	4.4	2.0 U	6.8	-	-	-	-	-	-	6.7
Ammonia-N	mg/L	-	-	-	-	-	3.4	-	2.0 U	2.2	2.0 U	0.20	-
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	-
Chemical oxygen demand (COD)	mg/L	-	20 U	10 U	10 U	10 U	10 U	-	18	24	21	13	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
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	-
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	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
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	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
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	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2013

Attachment B

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

AOI:														
Sample Location:			**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**influent-GWTS**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**	**Crotty Street Channel CB-2**
Sample ID:			**GW-12610-082117-SSH-08-17**	**W-12610-043018-SSH-0118**	**W-12610-060118-SSH-18101**	**W-12610-060118-SSH-18102**	**GW-12610A-082018-SSH-18109**	**W-040506-SSH-CB04**	**W-031307-SSH-CB07-4**	**CB2_8/27/07**	**CB2-(06/11/08)**	**CB2_(08/19/08)**	**CB-2_(03/12/09)**	**W-12610-032410-SSH-CB10-1**
Sample Date:			**8/21/2017**	**4/30/2018**	**6/1/2018**	**6/1/2018** *(Duplicate)*	**8/20/2018**	**4/5/2006**	**3/13/2007**	**8/27/2007**	**6/11/2008**	**8/19/2008**	**3/12/2009**	**3/24/2010**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0019 U	0.0002 U	0.000097 U	0.000097 U	0.00095 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0019 U	0.0002 U	0.000097 U	0.000097 U	0.00095 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0019 U	0.0002 U	0.000097 U	0.000097 U	0.00095 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	**0.0054**	**0.0013**	0.000097 U	0.000097 U	**0.0025**	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0019 U	0.0002 U	0.000097 U	0.000097 U	0.00095 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0019 U	0.0002 U	0.000097 U	0.000097 U	0.00095 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0019 U	0.0002 U	0.000097 U	0.000097 U	0.00095 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	0.30	0.28	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	2.0 U	2.0 U	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	10 U	10 U	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	4.8 U	4.9 U	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	7.6	7.6	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	0.10 U	0.10 U	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	4.0 U	4.0 U	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Crotty Street Channel
Sample Location:			**CB-2**	**CB-2**	**CB-2**	**CB-2**	**CB-2**	**CB-2**	**CB-2**	**CSA GW Ext. Sys. Discharg**	**CSA GW Ext. Sys. Discharg**	**CSA GW Ext. Sys. Discharg**	**CSA GW Ext. Sys. Discharg**
Sample ID:			**W-12610-040611-SSH-11103**	**W-12610-040611-SSH-11104**	**W-12610-102511-SSH-027**	**W-12610-041712-SSH-SA1202**	**GW-12610-080712-SSH-001**	**W-12610-040913-SSH-CB1213**	**W-12610-122914-SSH-1421**	**W-040506-SSH-C03**	**GW-081606-SSH-0601**	**W-031307-SSH-C07-3**	**CSC**
Sample Date:			**4/6/2011**	**4/6/2011** *(Duplicate)*	**10/25/2011**	**4/17/2012**	**8/7/2012**	**4/9/2013**	**12/29/2014**	**4/5/2006**	**8/16/2006**	**3/13/2007**	**8/23/2007**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.00036	0.00047	0.00023 J	**0.00051**
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.0002 U	0.00019 U	0.000095 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	200 B	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	0.069 J	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	2.0 U	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	20	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	220	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	1.1 J	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	7.39 HF	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	0.10 U	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	260	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	9.4	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	4.0 U	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Crotty Street Channel
Sample Location:			CSA GW Ext. Sys. Discharg	CSA GW Ext. Sys. Discharg	CSA GW Ext. Sys. Discharg	CSA GW Ext. Sys. Discharg	CSA GW Ext. Sys. Discharg	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharge	CSA GW Ext. Sys. Discharg	CSA GW Ext. Sys. Discharge
Sample ID:			CSC-(06/11/08)	DUP-(06/11/08)	CSC_(08/19/08)	CSC_(03/12/09)	CSC	W-12610-043010-SSH-CSC-4	GW-12610-081910-SSH-026	GW-12610-081910-SSH-027	W-12610-040611-SSH-11102	GW-12610-082211-JY-002	W-12610-041712-SSH-SA1201
Sample Date:			6/11/2008	6/11/2008 *(Duplicate)*	8/19/2008	3/12/2009	8/27/2009	4/30/2010	8/19/2010	8/19/2010 *(Duplicate)*	4/6/2011	8/22/2011	4/17/2012
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.000074 J	0.000077 J	0.00038	0.00014 J	**0.00075**	**0.00059 J**	**0.00062**	**0.00063**	0.0002 U	**0.00096**	**0.00062**
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000097 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.000044 J	0.000097 U
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:			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	EW14	EW6	EW7	EW8
Sample ID:			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	GW-12610-071811-SH-004	GW-12610-072011-SH-016	GW-12610-071811-SH-001(C)	GW-12610-071911-SH-009C
Sample Date:			8/7/2012	8/5/2014	12/29/2014	4/9/2015	8/25/2015	5/9/2016	8/25/2016	7/18/2011	7/20/2011	7/18/2011	7/19/2011
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	-	-	-
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	-	-	-
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	-	-	-
Aroclor-1242 (PCB-1242)	mg/L	0.0005	**0.00086**	**0.00068 J**	0.00022	0.00019 U	**0.00056**	0.00019	0.00019 U	**0.00054**	-	-	-
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	-	-	-
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	R	0.00019 U	-	-	-
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	R	0.00019 U	-	-	-
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	570	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	**12**	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	2.0 UJ	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	85	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	550	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	1.4 J	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	6.88 J	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	0.14	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	**690**	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	105	4240	9400	1920
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	31	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	99	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	0.17	4.57	6.19	0.12
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	6.69	8.30	8.07	6.90
Temperature, field	Deg C	-	-	-	-	-	-	-	-	19.75	18.05	19.74	18.45
Turbidity, field	NTU	-	-	-	-	-	-	-	-	18.4	66.9	50.8	34.1

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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:			**EW9**	**EW10**	**EW11**	**EW12**	**MSA GW Ext. Sys. Discharg**	**MSA GW Ext. Sys. Discharg**	**MSA GW Ext. Sys. Discharg**	**MSA GW Ext. Sys. Discharg**	**MSA GW Ext. Sys. Discharg**	**MSA GW Ext. Sys. Discharg**	**MSA GW Ext. Sys. Discharg**
Sample ID:			**GW-12610-071811-SH-002(C)**	**GW-12610-072011-SH-017**	**GW-12610-071911-SH-008C**	**GW-12610-072011-SH-015**	**W-040506-SSH-M02**	**GW-081606-SSH-0602**	**W-031307-SSH-M07-2**	**MSA**	**MSA-(06/11/08)**	**MSA_(08/19/08)**	**DUP_(03/12/09)**
Sample Date:			**7/18/2011**	**7/20/2011**	**7/19/2011**	**7/20/2011**	**4/5/2006**	**8/16/2006**	**3/13/2007**	**8/23/2007**	**6/11/2008**	**8/19/2008**	**3/12/2009**
													(Duplicate)
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	-	-	-	-	0.0002 U	0.0002 U	0.001 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	-	-	-	-	0.0002 U	0.0002 U	0.001 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	-	-	-	-	0.0002 U	0.0002 U	0.001 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	-	-	-	-	0.0002 U	**0.00062**	0.001 U	0.0002 U	0.0002 U	0.00025	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	-	-	-	-	0.0002	0.0002 U	0.001 U	0.0003	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	-	-	-	-	0.0002 U	0.0002 U	0.001 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	-	-	-	-	0.00018 J	0.00024	0.001 U	0.00026	0.0002 U	0.00028	0.0002 U
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	9360	19800	7140	3800	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	0.18	0.33	-	0.07	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	6.69	6.63	-	6.94	-	-	-	-	-	-	-
Temperature, field	Deg C	-	17.89	14.02	-	17.13	-	-	-	-	-	-	-
Turbidity, field	NTU	-	12.0	49.3	-	113	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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**	**MSA GW Ext. Sys. Discharge**	**MSA GW Ext. Sys. Discharge**	**MSA GW Ext. Sys. Discharge**	**MSA GW Ext. Sys. Discharge**
Sample ID:			**MSA_(03/12/09)**	**MSA**	**W-12610-032410-SSH-MSA10-2**	**GW-12610-081910-SSH-028**	**W-12610-040611-SSH-11101**	**GW-12610-082211-JY-001**	**W-12610-041712-SSH-SA1203**	**GW-12610-080712-SSH-003**	**W-12610-040913-SSH-MSA1313**	**W-12610-120913-SSH-010**	**GW-12610-080514-SSH-1401**
Sample Date:			**3/12/2009**	**8/27/2009**	**3/24/2010**	**8/19/2010**	**4/6/2011**	**8/22/2011**	**4/17/2012**	**8/7/2012**	**4/9/2013**	**12/9/2013**	**8/5/2014**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000096 U	0.00019 U	0.0019 U	0.0002 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000096 U	0.00019 U	0.0019 U	0.0002 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000096 U	0.00019 U	0.0019 U	0.0002 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	**0.0021**	**0.0013**	0.0002 U	0.0002 U	0.00013 J	0.00019 U	0.000096 U	0.00019 U	0.0019 U	0.0002 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.0004	0.00019 U	0.0019 U	0.0002 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.000096 U	0.00019 U	0.0019 U	0.0002 U	R
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002	0.0002 U	0.0002 U	0.00017 J	0.0002 U	0.00019 U	0.00018	0.00019 U	**0.0086**	0.0002 U	R
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Machine Storage Area
Sample Location:			MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1
Sample ID:			W-12610-122914-SSH-1422	GW-12610-082515-SSH-0215	W-12610-082516-SSH-1607	GW-081606-SSH-0604	MW102D1	MW102D1_(08/19/08)	MW102D1	GW-12610-081710-JY-001	GW-12610-082311-JY-010	GW-12610-080912-SSH-012	GW-12610-080713-JY-004	GW-12610-080614-SSH-1403
Sample Date:			12/29/2014	8/25/2015	8/25/2016	8/16/2006	8/21/2007	8/19/2008	8/26/2009	8/17/2010	8/23/2011	8/9/2012	8/7/2013	8/6/2014
Parameters	**Units**	**Michigan Residential Drinking water criteria[(1)]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 UH	0.00038 U	0.0019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 UH	0.00038 U	0.0019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 UH	0.00038 U	0.0019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00019 UH	0.00038 U	0.0019 U	0.00019 J	0.00044	0.0002 U	0.0004 J	0.00031	0.00028	0.00043	0.00019 U	0.00041 J
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 UH	0.00038 U	0.0019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 UH	0.00038 U	0.0019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	R	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 UH	0.00019 J	0.0019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.000046 J	0.00019 U	R	0.00019 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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**	**MW102D2**	**MW102D2**	**MW102D2**	**MW102D2**	**MW102D2**
Sample ID:			**GW-12610-082615-SSH-0715**	**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-081606-SSH-0606**	**MW102D2**	**MW102D2_(08/19/08)**	**MW102D2**	**GW-12610-081710-JY-002**
Sample Date:			**8/26/2015**	**8/26/2015**	**8/27/2016**	**8/27/2016**	**8/21/2017**	**8/21/2018**	**8/16/2006**	**8/21/2007**	**8/19/2008**	**8/26/2009**	**8/17/2010**
				(Duplicate)		***(Duplicate)***							
Parameters	**Units**	**Michigan Residential Drinking water criteria[(1)]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00034	0.00034	0.00019 U	0.00019 U	0.00026	0.00032	0.0002 U	0.0002 U	0.0002 U	0.000073 J	0.00013 J
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	MW102D3	MW102D3	MW102D3
Sample ID:			GW-12610-082311-JY-011	GW-12610-080912-SSH-011	GW-12610-080713-JY-005	GW-12610-080614-SSH-1404	GW-12610-082615-SSH-0915	GW-12610-082616-SSH-1612	GW-12610-082117-SSH-03-17	GW-12610A-082118-SSH-18110	GW-081606-SSH-0607	MW102D3	MW102D3_(08/19/08)
Sample Date:			8/23/2011	8/9/2012	8/7/2013	8/6/2014	8/26/2015	8/26/2016	8/21/2017	8/21/2018	8/16/2006	8/21/2007	8/19/2008
Parameters	**Units**	**Michigan Residential Drinking water criteria[(1)]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.0002 U	0.00019 U	0.00019 U	0.00013 J	0.00019 U	0.00015 J	0.00048	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.00013 J	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.000045 J	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Machine Storage Area
Sample Location:			MW102D3	MW102D3	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4	MW102D4
Sample ID:			MW102D3	GW-12610-081710-JY-003	GW-081606-SSH-0605	MW102D4	MW102D4_(08/19/08)	MW102D4	GW-12610-081710-JY-004	GW-12610-082311-JY-012	GW-12610-080912-SSH-010	GW-12610-080713-JY-006	GW-12610-080614-SSH-1405	GW-12610-080614-SSH-1406
Sample Date:			8/26/2009	8/17/2010	8/16/2006	8/21/2007	8/19/2008	8/26/2009	8/17/2010	8/23/2011	8/9/2012	8/7/2013	8/6/2014	8/6/2014 *(Duplicate)*
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000084 J	0.000082 J	0.00019 U	0.00019	0.00019 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Machine Storage Area
Sample Location:			**MW102D4**	**MW102D4**	**MW102D4**	**MW102D4**	**MW102D4**	**MW300S**	**MW300S**	**MW300S**	**MW300S**	**MW300S**	**MW300S**	**MW300S**
Sample ID:			**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-081706-SSH-0608**	**GW-081706-SSH-0609**	**MW300S**	**MW300S_(08/19/08)**	**DUP 4**	**MW300S**	**GW-12610-081810-JY-011**
Sample Date:			**8/26/2015**	**8/26/2016**	**8/21/2017**	**8/21/2017** *(Duplicate)*	**8/20/2018**	**8/17/2006**	**8/17/2006** *(Duplicate)*	**8/21/2007**	**8/19/2008**	**8/26/2009** *(Duplicate)*	**8/26/2009**	**8/18/2010**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.000078 J	0.00019 U	0.00011 J	0.000095 J	0.00024	0.00021	0.0004 J	0.00039 J	0.00014 J
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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-12610-081810-JY-012	GW-12610-071911-SH-014	GW-12610-082311-JY-004	GW-12610-082311-JY-005	GW-12610-080912-SSH-007	GW-12610-080912-SSH-008	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
Sample Date:			8/18/2010	7/19/2011	8/23/2011	8/23/2011	8/9/2012	8/9/2012	8/7/2013	8/7/2013	8/6/2014	8/26/2015	8/26/2016
			(Duplicate)			*(Duplicate)*		*(Duplicate)*		*(Duplicate)*			
Parameters	**Units**	**Michigan Residential Drinking water criteria[(1)]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	-	0.0002 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
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	-	0.0002 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
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	-	0.0002 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
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00016 J	-	0.00023	0.00024	0.00019 U	0.000083 J	0.00019 U	0.00019 U	0.0001 J	0.000095 J	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	-	0.0002 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
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	-	0.0002 U	0.00019 U	0.00019 U	0.00019 U	R	R	0.00019 U	0.00019 U	R
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	-	0.0002 U	0.00019 U	0.00019 U	0.00019 U	R	R	0.00019 U	0.00019 U	R
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	2960	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	0.14	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	7.28	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	16.78	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	4.92	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

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

AOI:			Machine Storage Area	Machine Storage Area	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:			MW300S	MW300S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S	LMW13S
Sample ID:			GW-12610-082117-SSH-07-17	GW-12610A-082018-SSH-18107	GW-081706-SSH-0610	LMW13S	LMW13S_(08/18/08)	GW-12610-081710-JY-009	GW-12610-082311-JY-006	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
Sample Date:			8/21/2017	8/20/2018	8/17/2006	8/21/2007	8/18/2008	8/17/2010	8/23/2011	8/8/2012	8/8/2012 *(Duplicate)*	8/8/2013	8/6/2014	8/26/2015
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.000084 J	0.00019 U	0.0002 U	**0.001**	0.0002 U	0.0002 U	**0.00072**	**0.00079**	**0.00085**	0.00019 UJ	0.00019 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 U	0.00019 U	**0.0012**	0.0002 U	**0.0016**	**0.0011**	0.00019 U	0.00019 U	0.00019 U	**0.001 J**	**0.001**	**0.00098**
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Perimeter Banks
Sample Location:			**LMW13S**	**LMW13S**	**LMW13S**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**
Sample ID:			**GW-12610-082616-SSH-1609**	**GW-12610-082217-SSH-09-17**	**GW-12610A-082018-SSH-18103**	**GW-081706-SSH-0611**	**LMW15D**	**LMW15D_(08/18/08)**	**MW15D**	**GW-12610-081710-JY-010**	**GW-12610-082311-JY-007**	**GW-12610-080812-SSH-006**	**GW-12610-080813-JY-009**	**GW-12610-080614-SSH-1409**
Sample Date:			**8/26/2016**	**8/22/2017**	**8/20/2018**	**8/17/2006**	**8/21/2007**	**8/18/2008**	**8/26/2009**	**8/17/2010**	**8/23/2011**	**8/8/2012**	**8/8/2013**	**8/6/2014**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00019 U	**0.00057**	**0.00056**	0.0002 U	0.0002 U	0.00019 J	0.000073 J	0.0002 U	0.00006 J	0.00013 J	0.00014 J	0.000065 J
Aroclor-1248 (PCB-1248)	mg/L	0.0005	**0.00058**	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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	Perimeter Banks
Sample Location:			**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**LMW15D**	**MW301D1**	**MW301D1**	**MW301D1**	**MW301D1**	**MW301D1**	**MW301D2**	**MW301D2**
Sample ID:			**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-081706-SSH-0612**	**MW301D1**	**MW301D1_(08/19/08)**	**MW301D1**	**GW-12610-081710-JY-005**	**GW-081706-SSH-0615**	**MW301D2**
Sample Date:			**8/26/2015**	**8/26/2016**	**8/22/2017**	**8/20/2018**	**8/20/2018** *(Duplicate)*	**8/17/2006**	**8/21/2007**	**8/19/2008**	**8/26/2009**	**8/17/2010**	**8/17/2006**	**8/21/2007**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00021	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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**	**Perimeter Banks**
Sample Location:			**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D2**	**MW301D3**
Sample ID:			**MW301D2_(08/19/08)**	**MW301D2**	**GW-12610-081710-JY-006**	**GW-12610-082311-JY-008**	**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-081706-SSH-0614**
Sample Date:			**8/19/2008**	**8/26/2009**	**8/17/2010**	**8/23/2011**	**8/9/2012**	**8/7/2013**	**8/6/2014**	**8/26/2015**	**12/14/2016**	**8/21/2017**	**8/20/2018**	**8/17/2006**
Parameters	**Units**	**Michigan Residential Drinking water criteria[1]**												
PCBs														
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.0002 U	0.000085 J	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0002 U	0.0002 UJ	0.0002 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00038 U	0.00019 U	0.00019 U	0.00019 U	0.0002 U
Wet														
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM														
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment B

Analytical Results Summary Sampling
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:			MW301D3	MW301D3	MW301D3	MW301D3	MW301D4	MW301D4	MW301D4	MW301D4	MW301D4	MW301D4	MW301D4
Sample ID:			MW301D3	MW301D3_(08/19/08)	MW301D3	GW-12610-081710-JY-007	GW-081706-SSH-0613	MW301D4	DUP3_(08/19/08)	MW301D4_(08/19/08)	MW301D4	GW-12610-081710-JY-008	GW-12610-082311-JY-009
Sample Date:			8/21/2007	8/19/2008	8/26/2009	8/17/2010	8/17/2006	8/21/2007	8/19/2008 *(Duplicate)*	8/19/2008	8/26/2009	8/17/2010	8/23/2011
Parameters	**Units**	**Michigan Residential Drinking water criteria[(1)]**											
PCBs													
Aroclor-1016 (PCB-1016)	mg/L	0.0005	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	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0005	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	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0005	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	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00012 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0005	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	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0005	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	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0005	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	0.0002 U
Wet													
Alkalinity, total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L	10	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical oxygen demand (COD)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness, carbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), polar	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Oil and grease (HEM), total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Phosphate, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	-	-	-	-	-	-	-	-	-	-	-
Total dissolved solids (TDS)	mg/L	500	-	-	-	-	-	-	-	-	-	-	-
Total microbial population	cfu/mL	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total suspended solids (TSS)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
FPARAM													
Dissolved oxygen (DO), field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
pH, field	s.u.	6.5 - 8.5	-	-	-	-	-	-	-	-	-	-	-
Temperature, field	Deg C	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, field	NTU	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.
(1) Michigan Part 201 Generic Cleanup Criteria and Screening Level - December 13, 2

Attachment C
Analytical Results and Reduced Validation - 2018 Annual Sampling Event

Memorandum

September 12, 2018

To:	Mike Tomka, GHD	Ref. No.:	012610A-T04
From:	Ruth Mickle/sb/26	Tel:	248-893-3400

Subject: **Analytical Results and Reduced Validation**
2018 Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
April and August 2018

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the 2018 Semi-Annual Groundwater Sampling at the RACER Bay City Site during April and August 2018. Samples were submitted to TestAmerica Laboratories, Inc., 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 method referenced in Table 3 and applicable guidance from the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008

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. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (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 biphenyls (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 RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the compounds specified in the method. All 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 sample set.

Field Duplicate Sample Analysis

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

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were 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.

Table 1

Sample Collection and Analysis Summary
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
April and August 2018

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/ Parameters: PCB	Comments
TestAmerica SDG No.: 240-94909-1						
W-12610-043018-SSH-0118	influent-GWTS	water	04/30/2018	9:30	X	
TestAmerica SDG No.: 240-100221-1						
GW-12610A-082018-SSH-18103	LMW13S	water	08/20/2018	9:21	X	
GW-12610A-082018-SSH-18104	LMW15D	water	08/20/2018	10:06	X	
GW-12610A-082018-SSH-18105	LMW15D	water	08/20/2018	10:11	X	Field Duplicate of SSH-18104
GW-12610A-082018-SSH-18106	MW301D2	water	08/20/2018	11:01	X	
GW-12610A-082018-SSH-18107	MW300S	water	08/20/2018	12:01	X	
GW-12610A-082018-SSH-18108	MW102D4	water	08/20/2018	13:16	X	MS/MSD
GW-12610A-082018-SSH-18109	influent-GWTS	water	08/20/2018	14:05	X	
GW-12610A-082118-SSH-18110	MW102D2	water	08/21/2018	8:51	X	
GW-12610A-082118-SSH-18111	MW102D1	water	08/21/2018	10:01	X	

Notes:

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

Table 2

Validated Analytical Results Summary
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
April and August 2018

Location ID:		influent-GWTS	influent-GWTS	LMW13S	LMW15D
Sample Name:		W-12610-043018-SSH-0118	GW-12610A-082018-SSH-18109	GW-12610A-082018-SSH-18103	GW-12610A-082018-SSH-18104
Sample Date:		04/30/2018	08/20/2018	08/20/2018	08/20/2018
Parameters	**Unit**				
Pesticides/PCBs					
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.95 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.95 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.95 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	1.3	2.5	0.56	0.21
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.95 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.95 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.95 U	0.19 U	0.19 U

Validated Analytical Results Summary
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
April and August 2018

Location ID:		LMW15D	MW102D1	MW102D2	MW102D4
Sample Name:		GW-12610A-082018-SSH-18105	GW-12610A-082118-SSH-18111	GW-12610A-082118-SSH-18110	GW-12610A-082018-SSH-18108
Sample Date:		08/20/2018 Duplicate	08/21/2018	08/21/2018	08/20/2018
Parameters	**Unit**				
Pesticides/PCBs					
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.32	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U

Table 2

Validated Analytical Results Summary
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
April and August 2018

Location ID:		**MW300S**	**MW301D2**
Sample Name:		**GW-12610A-082018-SSH-18107**	**GW-12610A-082018-SSH-18106**
Sample Date:		**08/20/2018**	**08/20/2018**
Parameters	**Unit**		
Pesticides/PCBs			
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U

Notes:

U - Not detected at the associated reporting limit

Table 3

Analytical Method
Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
April and August 2018

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Polychlorinated Biphenyls (PCB)	SW-846 8082	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
PCB - Polychlorinated Biphenyls

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-88685-1
Client Project/Site: 12610-T04, 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:
12/13/2017 8:34:35 AM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

Table of Contents

Job ID: 240-88685-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-88685-1

Comments
No additional comments.

Receipt
The samples were received on 12/1/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1º C.

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

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

Metals
Method(s) 200.7 Rev 4.4: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: WT-12610-113017-SSH-02-17 (240-88685-1). The continuing calibration blanks and method blanks may not support the lower PQL.

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
Method(s) 3520C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-306029.

Method(s) 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-306419.

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: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

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

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Sample Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-88685-1	WT-12610-113017-SSH-02-17	Water	11/30/17 14:00	12/01/17 09:45
240-88685-2	TB-12610-113017-SSH-03-17	Water	11/30/17 14:15	12/01/17 09:45

Detection Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

Client Sample ID: WT-12610-113017-SSH-02-17 — Lab Sample ID: 240-88685-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	400		100	25	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	74		20	1.6	ug/L	1		200.7 Rev 4.4	Total Recoverable
Chemical Oxygen Demand	13		10	4.1	mg/L	1		410.4	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	0.20		0.20	0.093	mg/L	1		SM 4500 NH3 D	Total/NA

Client Sample ID: TB-12610-113017-SSH-03-17 — Lab Sample ID: 240-88685-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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 CAN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
5210B-2001	BOD, 5-Day	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 4500 NH3 D	Ammonia	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	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 = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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

Client Sample ID: WT-12610-113017-SSH-02-17
Date Collected: 11/30/17 14:00
Date Received: 12/01/17 09:45

Lab Sample ID: 240-88685-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			12/06/17 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*69 - 120*		*12/06/17 02:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*61 - 138*		*12/06/17 02:49*	*1*
Toluene-d8 (Surr)	*103*		*73 - 120*		*12/06/17 02:49*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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

Client Sample ID: TB-12610-113017-SSH-03-17
Date Collected: 11/30/17 14:15
Date Received: 12/01/17 09:45

Lab Sample ID: 240-88685-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			12/06/17 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*69 - 120*		*12/06/17 03:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 138*		*12/06/17 03:11*	*1*
Toluene-d8 (Surr)	*99*		*73 - 120*		*12/06/17 03:11*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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

Client Sample ID: WT-12610-113017-SSH-02-17
Date Collected: 11/30/17 14:00
Date Received: 12/01/17 09:45

Lab Sample ID: 240-88685-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.048	ug/L		12/04/17 07:26	12/08/17 22:19	1
Aroclor-1221	0.096	U	0.096	0.087	ug/L		12/04/17 07:26	12/08/17 22:19	1
Aroclor-1232	0.096	U	0.096	0.067	ug/L		12/04/17 07:26	12/08/17 22:19	1
Aroclor-1242	0.096	U	0.096	0.058	ug/L		12/04/17 07:26	12/08/17 22:19	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		12/04/17 07:26	12/08/17 22:19	1
Aroclor-1254	0.096	U	0.096	0.029	ug/L		12/04/17 07:26	12/08/17 22:19	1
Aroclor-1260	0.096	U	0.096	0.038	ug/L		12/04/17 07:26	12/08/17 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*75*		*10 - 114*	*12/04/17 07:26*	*12/08/17 22:19*	*1*
Tetrachloro-m-xylene	*75*		*15 - 131*	*12/04/17 07:26*	*12/08/17 22:19*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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

Client Sample ID: WT-12610-113017-SSH-02-17
Date Collected: 11/30/17 14:00
Date Received: 12/01/17 09:45

Lab Sample ID: 240-88685-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.92	ug/L		12/04/17 14:00	12/06/17 02:04	1
Cadmium	2.0	U	2.0	0.29	ug/L		12/04/17 14:00	12/06/17 02:04	1
Chromium	5.0	U	5.0	0.55	ug/L		12/04/17 14:00	12/06/17 02:04	1
Copper	20	U	20	3.9	ug/L		12/04/17 14:00	12/06/17 02:04	1
Iron	**400**		100	25	ug/L		12/04/17 14:00	12/06/17 02:04	1
Nickel	**74**		20	1.6	ug/L		12/04/17 14:00	12/06/17 02:04	1
Lead	3.0	U	3.0	1.9	ug/L		12/04/17 14:00	12/06/17 02:04	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: WT-12610-113017-SSH-02-17
Date Collected: 11/30/17 14:00
Date Received: 12/01/17 09:45

Lab Sample ID: 240-88685-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		12/04/17 14:00	12/06/17 15:34	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

General Chemistry

Client Sample ID: WT-12610-113017-SSH-02-17
Date Collected: 11/30/17 14:00
Date Received: 12/01/17 09:45

Lab Sample ID: 240-88685-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.7	U	4.7	0.97	mg/L			12/12/17 08:14	1
Chemical Oxygen Demand	**13**		10	4.1	mg/L			12/06/17 14:09	1
pH	**7.2**	**HF**	0.1	0.1	SU			12/01/17 15:53	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			12/01/17 14:49	1
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			12/04/17 09:20	1
Ammonia	**0.20**		0.20	0.093	mg/L			12/06/17 09:56	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			12/04/17 13:45	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

GC/MS VOA

Analysis Batch: 306349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	624	
240-88685-2	TB-12610-113017-SSH-03-17	Total/NA	Water	624	
MB 240-306349/7	Method Blank	Total/NA	Water	624	
LCS 240-306349/4	Lab Control Sample	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 306029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	608	
MB 240-306029/15-A	Method Blank	Total/NA	Water	608	
LCS 240-306029/16-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 306974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	608	306029
MB 240-306029/15-A	Method Blank	Total/NA	Water	608	306029

Analysis Batch: 307119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-306029/16-A	Lab Control Sample	Total/NA	Water	608	306029

Metals

Prep Batch: 306063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total Recoverable	Water	200.7	
MB 240-306063/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-306063/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 306065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	245.1	
MB 240-306065/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-306065/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 306329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-306065/1-A	Method Blank	Total/NA	Water	245.1	306065
LCS 240-306065/2-A	Lab Control Sample	Total/NA	Water	245.1	306065

Analysis Batch: 306330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total Recoverable	Water	200.7 Rev 4.4	306063
MB 240-306063/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	306063
LCS 240-306063/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	306063

Analysis Batch: 306568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	245.1	306065

General Chemistry

Analysis Batch: 305882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	5210B-2001	
SCB 240-305882/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-305882/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-305882/3	Lab Control Sample	Total/NA	Water	5210B-2001	

Analysis Batch: 305897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	4500 H+ B-2000	
LCS 240-305897/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 306066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	SM 2540D	
MB 240-306066/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-306066/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 306177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	SM4500 P E-1999	
MB 240-306177/35	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-306177/36	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	

Analysis Batch: 306496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	410.4	
MB 240-306496/9	Method Blank	Total/NA	Water	410.4	
LCS 240-306496/10	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 306574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	SM 4500 NH3 D	
MB 240-306574/7	Method Blank	Total/NA	Water	SM 4500 NH3 D	
LCS 240-306574/8	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	

Analysis Batch: 307287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-88685-1	WT-12610-113017-SSH-02-17	Total/NA	Water	1664A	
MB 240-307287/1	Method Blank	Total/NA	Water	1664A	
LCS 240-307287/2	Lab Control Sample	Total/NA	Water	1664A	
240-88685-1 MS	WT-12610-113017-SSH-02-17	Total/NA	Water	1664A	

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

Lab Sample ID: MB 240-306349/7
Matrix: Water
Analysis Batch: 306349

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			12/05/17 18:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/05/17 18:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 138*		*12/05/17 18:57*	*1*
Toluene-d8 (Surr)	*108*		*73 - 120*		*12/05/17 18:57*	*1*

Lab Sample ID: LCS 240-306349/4
Matrix: Water
Analysis Batch: 306349

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	19.4		ug/L		97	10 - 251

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*61 - 138*
Toluene-d8 (Surr)	*112*		*73 - 120*

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

Lab Sample ID: MB 240-306029/15-A
Matrix: Water
Analysis Batch: 306974

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.050	ug/L		12/04/17 07:26	12/08/17 20:31	1
Aroclor-1221	0.10	U	0.10	0.090	ug/L		12/04/17 07:26	12/08/17 20:31	1
Aroclor-1232	0.10	U	0.10	0.070	ug/L		12/04/17 07:26	12/08/17 20:31	1
Aroclor-1242	0.10	U	0.10	0.060	ug/L		12/04/17 07:26	12/08/17 20:31	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		12/04/17 07:26	12/08/17 20:31	1
Aroclor-1254	0.10	U	0.10	0.030	ug/L		12/04/17 07:26	12/08/17 20:31	1
Aroclor-1260	0.10	U	0.10	0.040	ug/L		12/04/17 07:26	12/08/17 20:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*70*		*10 - 114*	*12/04/17 07:26*	*12/08/17 20:31*	*1*
Tetrachloro-m-xylene	*63*		*15 - 131*	*12/04/17 07:26*	*12/08/17 20:31*	*1*

Lab Sample ID: LCS 240-306029/16-A
Matrix: Water
Analysis Batch: 307119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.95		ug/L		78	50 - 114
Aroclor-1260	2.50	2.11		ug/L		84	8 - 127

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

Lab Sample ID: LCS 240-306029/16-A
Matrix: Water
Analysis Batch: 307119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306029

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*113*		*10 - 114*
Tetrachloro-m-xylene	*110*		*15 - 131*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-306063/1-A
Matrix: Water
Analysis Batch: 306330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 306063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.92	ug/L		12/04/17 14:00	12/05/17 12:05	1
Cadmium	2.0	U	2.0	0.29	ug/L		12/04/17 14:00	12/05/17 12:05	1
Chromium	5.0	U	5.0	0.55	ug/L		12/04/17 14:00	12/05/17 12:05	1
Copper	20	U	20	3.9	ug/L		12/04/17 14:00	12/05/17 12:05	1
Iron	100	U	100	25	ug/L		12/04/17 14:00	12/05/17 12:05	1
Nickel	20	U	20	1.6	ug/L		12/04/17 14:00	12/05/17 12:05	1
Lead	3.0	U	3.0	1.9	ug/L		12/04/17 14:00	12/05/17 12:05	1

Lab Sample ID: LCS 240-306063/2-A
Matrix: Water
Analysis Batch: 306330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 306063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	50.2		ug/L		100	85 - 115
Cadmium	50.0	49.6		ug/L		99	85 - 115
Chromium	200	194		ug/L		97	85 - 115
Copper	250	247		ug/L		99	85 - 115
Iron	1000	1010		ug/L		101	85 - 115
Nickel	500	498		ug/L		100	85 - 115
Lead	500	484		ug/L		97	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-306065/1-A
Matrix: Water
Analysis Batch: 306329

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306065

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		12/04/17 14:00	12/05/17 09:48	1

Lab Sample ID: LCS 240-306065/2-A
Matrix: Water
Analysis Batch: 306329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306065

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.71		ug/L		94	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-307287/1
Matrix: Water
Analysis Batch: 307287

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	1.0	mg/L			12/12/17 08:14	1

Lab Sample ID: LCS 240-307287/2
Matrix: Water
Analysis Batch: 307287

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	35.40		mg/L		89	78 - 114

Lab Sample ID: 240-88685-1 MS
Matrix: Water
Analysis Batch: 307287

Client Sample ID: WT-12610-113017-SSH-02-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	4.7	U	37.5	31.99		mg/L		85	78 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-306496/9
Matrix: Water
Analysis Batch: 306496

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	4.1	mg/L			12/06/17 14:05	1

Lab Sample ID: LCS 240-306496/10
Matrix: Water
Analysis Batch: 306496

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	55.2	52.9		mg/L		96	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-305897/2
Matrix: Water
Analysis Batch: 305897

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	9.19	9.2		SU		100	97 - 103

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

Lab Sample ID: SCB 240-305882/2
Matrix: Water
Analysis Batch: 305882

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	2.19	s	2.0	1.2	mg/L			12/01/17 13:42	1

Lab Sample ID: USB 240-305882/1
Matrix: Water
Analysis Batch: 305882

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			12/01/17 13:40	1

Lab Sample ID: LCS 240-305882/3
Matrix: Water
Analysis Batch: 305882

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	179		mg/L		91	85 - 115

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

Lab Sample ID: MB 240-306066/1
Matrix: Water
Analysis Batch: 306066

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	2.2	mg/L			12/04/17 09:20	1

Lab Sample ID: LCS 240-306066/2
Matrix: Water
Analysis Batch: 306066

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	58.1	57.0		mg/L		98	64 - 120

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 240-306574/7
Matrix: Water
Analysis Batch: 306574

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	0.093	mg/L			12/06/17 09:21	1

Lab Sample ID: LCS 240-306574/8
Matrix: Water
Analysis Batch: 306574

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.96	2.00		mg/L		102	85 - 114

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-306177/35
Matrix: Water
Analysis Batch: 306177

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	0.037	mg/L			12/04/17 13:45	1

Lab Sample ID: LCS 240-306177/36
Matrix: Water
Analysis Batch: 306177

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	0.665	0.730		mg/L		110	77 - 120

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

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	(69-120)	(61-138)	(73-120)
240-88685-1	WT-12610-113017-SSH-02-17	89	95	103
240-88685-2	TB-12610-113017-SSH-03-17	89	94	99
LCS 240-306349/4	Lab Control Sample	102	102	112
MB 240-306349/7	Method Blank	97	100	108

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)
240-88685-1	WT-12610-113017-SSH-02-17	75	75
MB 240-306029/15-A	Method Blank	70	63

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1	TCX1
Lab Sample ID	Client Sample ID	(10-114)	(15-131)
LCS 240-306029/16-A	Lab Control Sample	113	110

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

Client Sample ID: WT-12610-113017-SSH-02-17

Lab Sample ID: 240-88685-1

Date Collected: 11/30/17 14:00

Matrix: Water

Date Received: 12/01/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	306349	12/06/17 02:49	TJL1	TAL CAN
Total/NA	Prep	608			306029	12/04/17 07:26	SDE	TAL CAN
Total/NA	Analysis	608		1	306974	12/08/17 22:19	KMG	TAL CAN
Total Recoverable	Prep	200.7			306063	12/04/17 14:00	AJC	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	306330	12/06/17 02:04	KLC	TAL CAN
Total/NA	Prep	245.1			306065	12/04/17 14:00	AJC	TAL CAN
Total/NA	Analysis	245.1		1	306568	12/06/17 15:34	DSH	TAL CAN
Total/NA	Analysis	1664A		1	307287	12/12/17 08:14	BLW	TAL CAN
Total/NA	Analysis	410.4		1	306496	12/06/17 14:09	JMB	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	305897	12/01/17 15:53	MMM	TAL CAN
Total/NA	Analysis	5210B-2001		1	305882	12/01/17 14:49	JESW	TAL CAN
Total/NA	Analysis	SM 2540D		1	306066	12/04/17 09:20	MMM	TAL CAN
Total/NA	Analysis	SM 4500 NH3 D		1	306574	12/06/17 09:56	JAS	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	306177	12/04/17 13:45	JWW	TAL CAN

Client Sample ID: TB-12610-113017-SSH-03-17

Lab Sample ID: 240-88685-2

Date Collected: 11/30/17 14:15

Matrix: Water

Date Received: 12/01/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	306349	12/06/17 03:11	TJL1	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-88685-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-18
Connecticut	State Program	1	PH-0590	12-31-17 *
Florida	NELAP	4	E87225	06-30-18
Illinois	NELAP	5	200004	07-31-18
Kansas	NELAP	7	E-10336	01-31-18 *
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17 *
Minnesota	NELAP	5	039-999-348	12-31-17 *
Minnesota (Petrofund)	State Program	1	3506	07-31-18
Nevada	State Program	9	OH-000482008A	07-31-18
New Jersey	NELAP	2	OH001	06-30-18
New York	NELAP	2	10975	03-31-18
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-18
Texas	NELAP	6	T104704517-17-9	08-31-18
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18
Washington	State Program	10	C971	01-12-18 *
West Virginia DEP	State Program	3	210	12-31-17 *

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

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

3.4/3.4

Chain of Custody Record

190568

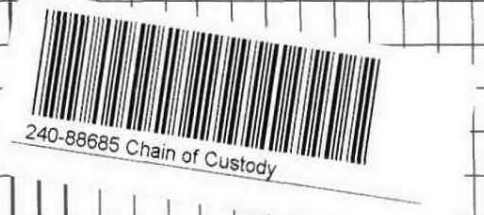
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: M. Tomka	Site Contact: SE Pardys	Date: 11/30/17	COC No: 190568
Company Name: GHD	Tel/Fax: 519 884 0510	Lab Contact: D. Heckler	Carrier: FedEx	1 of 1 COCs
Address: 26850 Haggerty Rd	Analysis Turnaround Time			Sampler: S. Hockmeyer
City/State/Zip: Farmington Hills, MI	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone: 248 893 3400	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: RacerTrust Bay City				Job / SDG No.:
Site:				
PO# 550w 12610-01				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCBs	pH	HEM	vinyl chloride	TSS	T. Phosphorus	COD	BOD	metals	ammonia nitrogen	Sample Specific Notes:
WT-12610-113017-SSH-02-17	11/30/17	1400	C,G	WT	14	N	N	X	X	X	X	X	X	X	X	X	X	
TB-12610-113017-SSH-03-17	11/30/17	1415	TB	TB	1	N	N				X							



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1,2,3,4

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 839410 | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	GHD	11/30/17 1600	[signature]	TA	12/1/17 845
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative Login # : 88685
Canton Facility

Client GHD Site Name _____ Cooler unpacked by:

Cooler Received on 12/1/17 Opened on 12/1/17

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

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

TestAmerica Cooler # _____ 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-8 (CF **-0.3** °C) Observed Cooler Temp. 3.4 °C Corrected Cooler Temp. 3.1 °C

IR GUN #36 (CF **+0.3**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

~~IR GUN # 627 (CF **-1.3**°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 be reconciled with the COC?	(Yes)	No
9. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
10. Sufficient quantity received to perform indicated analyses?	(Yes)	No
11. Are these work share samples?	Yes	(No)
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# **HC730269**
13. Were VOAs on the COC?	(Yes)	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	(No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	(Yes)	No
16. 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 _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

17. 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)

18. SAMPLE PRESERVATION

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

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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
WT-12610-113017-SSH-02-17	240-88685-G-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
WT-12610-113017-SSH-02-17	240-88685-H-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
WT-12610-113017-SSH-02-17	240-88685-I-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
WT-12610-113017-SSH-02-17	240-88685-M-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
WT-12610-113017-SSH-02-17	240-88685-N-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-94909-1
Client Project/Site: 12610-T04, 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:
5/8/2018 3:13:11 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Job ID: 240-94909-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-94909-1

Comments
No additional comments.

Receipt
The sample was received on 5/2/2018 10:45 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9º C.

GC Semi VOA
Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: W-12610-043018-SSH-0118 (240-94909-1).3560344, 3449339, 3361889.

Method(s) 8082A: The following samples appear to contain polychlorinated biphenyls (PCBs); however, the Aroclor patterns of the PCBs in the sample is altered and do not directly match the laboratory's individual Aroclor standards used for instrument calibration:W-12610-043018-SSH-0118 (240-94909-1). These altered PCB patterns may be caused by weathering, other environmental processes, and/or contributions from the presence of multiple Aroclors resulting in overlapping PCB patterns. The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with the reported results.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-325625.

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: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Sample Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-94909-1	W-12610-043018-SSH-0118	Water	04/30/18 09:30	05/02/18 10:45

Detection Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

Client Sample ID: W-12610-043018-SSH-0118 **Lab Sample ID: 240-94909-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1.3		0.20	0.075	ug/L	1		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
3520C	Liquid-Liquid Extraction (Continuous)	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 = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

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

Client Sample ID: W-12610-043018-SSH-0118
Date Collected: 04/30/18 09:30
Date Received: 05/02/18 10:45

Lab Sample ID: 240-94909-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.055	ug/L		05/03/18 08:35	05/08/18 10:03	1
Aroclor-1221	0.20	U	0.20	0.056	ug/L		05/03/18 08:35	05/08/18 10:03	1
Aroclor-1232	0.20	U	0.20	0.073	ug/L		05/03/18 08:35	05/08/18 10:03	1
Aroclor-1242	**1.3**		0.20	0.075	ug/L		05/03/18 08:35	05/08/18 10:03	1
Aroclor-1248	0.20	U	0.20	0.049	ug/L		05/03/18 08:35	05/08/18 10:03	1
Aroclor-1254	0.20	U	0.20	0.039	ug/L		05/03/18 08:35	05/08/18 10:03	1
Aroclor-1260	0.20	U	0.20	0.045	ug/L		05/03/18 08:35	05/08/18 10:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*22 - 120*	*05/03/18 08:35*	*05/08/18 10:03*	*1*
DCB Decachlorobiphenyl	*40*		*10 - 120*	*05/03/18 08:35*	*05/08/18 10:03*	*1*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

GC Semi VOA

Prep Batch: 325182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94909-1	W-12610-043018-SSH-0118	Total/NA	Water	3520C	
MB 240-325182/10-A	Method Blank	Total/NA	Water	3520C	
LCS 240-325182/11-A	Lab Control Sample	Total/NA	Water	3520C	

Analysis Batch: 325774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94909-1	W-12610-043018-SSH-0118	Total/NA	Water	8082A	325182
MB 240-325182/10-A	Method Blank	Total/NA	Water	8082A	325182
LCS 240-325182/11-A	Lab Control Sample	Total/NA	Water	8082A	325182

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

Lab Sample ID: MB 240-325182/10-A
Matrix: Water
Analysis Batch: 325774

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 325182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.056	ug/L		05/03/18 08:35	05/08/18 07:47	1
Aroclor-1221	0.20	U	0.20	0.057	ug/L		05/03/18 08:35	05/08/18 07:47	1
Aroclor-1232	0.20	U	0.20	0.074	ug/L		05/03/18 08:35	05/08/18 07:47	1
Aroclor-1242	0.20	U	0.20	0.076	ug/L		05/03/18 08:35	05/08/18 07:47	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		05/03/18 08:35	05/08/18 07:47	1
Aroclor-1254	0.20	U	0.20	0.040	ug/L		05/03/18 08:35	05/08/18 07:47	1
Aroclor-1260	0.20	U	0.20	0.046	ug/L		05/03/18 08:35	05/08/18 07:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*22 - 120*	*05/03/18 08:35*	*05/08/18 07:47*	*1*
DCB Decachlorobiphenyl	*95*		*10 - 120*	*05/03/18 08:35*	*05/08/18 07:47*	*1*

Lab Sample ID: LCS 240-325182/11-A
Matrix: Water
Analysis Batch: 325774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 325182

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			2.50	1.94		ug/L		77	28 - 120		
Aroclor-1260			2.50	2.16		ug/L		86	30 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*22 - 120*
DCB Decachlorobiphenyl	*80*		*10 - 120*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

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)								
240-94909-1	W-12610-043018-SSH-0118	58	40								
LCS 240-325182/11-A	Lab Control Sample	73	80								
MB 240-325182/10-A	Method Blank	81	95								

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

Client Sample ID: W-12610-043018-SSH-0118 **Lab Sample ID: 240-94909-1**
Date Collected: 04/30/18 09:30 **Matrix: Water**
Date Received: 05/02/18 10:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			325182	05/03/18 08:35	WKD	TAL CAN
Total/NA	Analysis	8082A		1	325774	05/08/18 10:03	LSH	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-94909-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-18 *
Illinois	NELAP	5	200004	07-31-18
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18
Nevada	State Program	9	OH-000482008A	07-31-18
New Jersey	NELAP	2	OH001	06-30-18 *
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-18
Texas	NELAP	6	T104704517-17-9	08-31-18
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

MICHIGAN 190

Chain of Custody Record

2.8/C2.9

248782

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: M. Tomka	Site Contact: JE Pardys	Date: 5/1/18	COC No: 248782
Company Name: GHD	Tel/Fax: 519 340 3823	Lab Contact: D. Heckler	Carrier: FedEx	___ of ___ COCs
Address: 26850 Haggerty Rd	Analysis Turnaround Time			Sampler: S. Hoevemeyer
City/State/Zip: Farmington Hills MI	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone: 248 893 3400	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: RacerTrust Bay City	☐ 1 week			
Site: 12610 - TO4 - 001418	☐ 2 days			Job / SDG No.:
PO #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCBs	Sample Specific Notes:
W-12610-043018-SSH-011B	4/30/18	0930	G	GW	2	N	N	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 667409 | Cooler Temp. (°C): Obs'd:____ Corr'd:____ Therm ID No.:____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	GHD	5/1/18 1530		TAC	5/2/18 1045
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

5/8/2018

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 94909**
Canton Facility

Client GHD Site Name _____ Cooler unpacked by: SV

Cooler Received on 5/2/18 Opened on 5/2/18

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 MI 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-8 (CF **+0.1** °C) Observed Cooler Temp. 2.8 °C Corrected Cooler Temp. 2.9 °C
   IR GUN #36 (CF **+0.3**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   ~~IR GUN # 627 (CF **-1.3**°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 be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# **HC732776**
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	No
16. 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 _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. 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)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

WI-NC-099

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-96473-1
Client Project/Site: 12610-T04, 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:
6/15/2018 7:45:02 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Job ID: 240-96473-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-96473-1

Comments
No additional comments.

Receipt
The samples were received on 6/2/2018 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.7º C and 1.9º 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(s) 200.7 Rev 4.4, 6010B, 6010D: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: W-12610-060118-SSH-18101 (240-96473-1) and W-12610-060118-SSH-18102 (240-96473-2). The continuing calibration blanks and method blanks may not support the lower PQL.

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

General Chemistry
Method(s) SM 5210B: The USB dilution water D.O. depletion was greater than 0.2 mg/L. The associated sample results in batch 240-329747 are qualified and reported.

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

Organic Prep
Method(s) 3520C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-330044.

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

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

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.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
s	Seeded Control Blank (SCB) Recovery High

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Sample Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-96473-1	W-12610-060118-SSH-18101	Water	06/01/18 09:15	06/02/18 09:35
240-96473-2	W-12610-060118-SSH-18102	Water	06/01/18 09:20	06/02/18 09:35

Detection Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Client Sample ID: W-12610-060118-SSH-18101 — Lab Sample ID: 240-96473-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.83	J	5.0	0.63	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	43	J	100	26	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	43		20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
pH	7.6	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	0.30		0.20	0.093	mg/L	1		SM 4500 NH3 D	Total/NA

Client Sample ID: W-12610-060118-SSH-18102 — Lab Sample ID: 240-96473-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	1.1	J	5.0	0.63	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	45	J	100	26	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	43		20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
pH	7.6	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	0.28		0.20	0.093	mg/L	1		SM 4500 NH3 D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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 CAN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
5210B-2001	BOD, 5-Day	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 4500 NH3 D	Ammonia	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN
200.7	Preparation, Total Recoverable Metals	EPA	TAL CAN
245.1	Preparation, Mercury	EPA	TAL CAN
608	Liquid-Liquid Extraction (Continuous)	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 = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.040	ug/L			06/05/18 07:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*06/05/18 07:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*61 - 138*		*06/05/18 07:08*	*1*
Toluene-d8 (Surr)	*112*		*73 - 120*		*06/05/18 07:08*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.040	ug/L			06/05/18 07:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*06/05/18 07:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*61 - 138*		*06/05/18 07:31*	*1*
Toluene-d8 (Surr)	*113*		*73 - 120*		*06/05/18 07:31*	*1*

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

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		06/05/18 07:45	06/06/18 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*69*		*10 - 114*	*06/05/18 07:45*	*06/06/18 23:43*	*1*
Tetrachloro-m-xylene	*64*		*15 - 131*	*06/05/18 07:45*	*06/06/18 23:43*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		06/05/18 07:45	06/07/18 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*10 - 114*	*06/05/18 07:45*	*06/07/18 00:03*	*1*
Tetrachloro-m-xylene	*66*		*15 - 131*	*06/05/18 07:45*	*06/07/18 00:03*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/04/18 14:00	06/11/18 20:00	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/04/18 14:00	06/11/18 20:00	1
Chromium	**0.83**	**J**	5.0	0.63	ug/L		06/04/18 14:00	06/11/18 20:00	1
Copper	20	U	20	3.5	ug/L		06/04/18 14:00	06/11/18 20:00	1
Iron	**43**	**J**	100	26	ug/L		06/04/18 14:00	06/11/18 20:00	1
Nickel	**43**		20	2.2	ug/L		06/04/18 14:00	06/11/18 20:00	1
Lead	3.0	U	3.0	2.8	ug/L		06/04/18 14:00	06/11/18 20:00	1

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

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/04/18 14:00	06/11/18 20:04	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/04/18 14:00	06/11/18 20:04	1
Chromium	**1.1**	**J**	5.0	0.63	ug/L		06/04/18 14:00	06/11/18 20:04	1
Copper	20	U	20	3.5	ug/L		06/04/18 14:00	06/11/18 20:04	1
Iron	**45**	**J**	100	26	ug/L		06/04/18 14:00	06/11/18 20:04	1
Nickel	**43**		20	2.2	ug/L		06/04/18 14:00	06/11/18 20:04	1
Lead	3.0	U	3.0	2.8	ug/L		06/04/18 14:00	06/11/18 20:04	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/04/18 12:00	06/05/18 14:33	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/04/18 12:00	06/05/18 14:35	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

General Chemistry

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.8	U	4.8	0.99	mg/L			06/15/18 10:17	1
Chemical Oxygen Demand	10	U	10	4.1	mg/L			06/11/18 11:40	1
pH	**7.6**	**HF**	0.1	0.1	SU			06/02/18 10:53	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/02/18 11:13	1
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			06/07/18 09:20	1
Ammonia	**0.30**		0.20	0.093	mg/L			06/11/18 10:45	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			06/12/18 11:54	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

General Chemistry

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.9	U	4.9	1.0	mg/L			06/15/18 10:17	1
Chemical Oxygen Demand	10	U	10	4.1	mg/L			06/11/18 11:41	1
pH	**7.6**	**HF**	0.1	0.1	SU			06/02/18 10:55	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/02/18 11:20	1
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			06/07/18 09:20	1
Ammonia	**0.28**		0.20	0.093	mg/L			06/11/18 10:48	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			06/12/18 11:58	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

GC/MS VOA

Analysis Batch: 329974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	624	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	624	
MB 240-329974/32	Method Blank	Total/NA	Water	624	
LCS 240-329974/33	Lab Control Sample	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 330044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	608	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	608	
MB 240-330044/12-A	Method Blank	Total/NA	Water	608	
LCS 240-330044/13-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 330369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	608	330044
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	608	330044
MB 240-330044/12-A	Method Blank	Total/NA	Water	608	330044
LCS 240-330044/13-A	Lab Control Sample	Total/NA	Water	608	330044

Metals

Prep Batch: 329854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total Recoverable	Water	200.7	
240-96473-2	W-12610-060118-SSH-18102	Total Recoverable	Water	200.7	
MB 240-329854/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-329854/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 329860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	245.1	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	245.1	
MB 240-329860/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-329860/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 330279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	245.1	329860
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	245.1	329860
MB 240-329860/1-A	Method Blank	Total/NA	Water	245.1	329860
LCS 240-329860/2-A	Lab Control Sample	Total/NA	Water	245.1	329860

Analysis Batch: 331132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total Recoverable	Water	200.7 Rev 4.4	329854
240-96473-2	W-12610-060118-SSH-18102	Total Recoverable	Water	200.7 Rev 4.4	329854
MB 240-329854/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	329854
LCS 240-329854/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	329854

General Chemistry

Analysis Batch: 329746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	4500 H+ B-2000	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	4500 H+ B-2000	
LCS 240-329746/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 329747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	5210B-2001	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	5210B-2001	
SCB 240-329747/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-329747/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-329747/3	Lab Control Sample	Total/NA	Water	5210B-2001	

Analysis Batch: 330472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	SM 2540D	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	SM 2540D	
MB 240-330472/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-330472/2	Lab Control Sample	Total/NA	Water	SM 2540D	
240-96473-1 DU	W-12610-060118-SSH-18101	Total/NA	Water	SM 2540D	

Analysis Batch: 330950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	410.4	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	410.4	
MB 240-330950/9	Method Blank	Total/NA	Water	410.4	
LCS 240-330950/10	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 331046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	SM 4500 NH3 D	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	SM 4500 NH3 D	
MB 240-331046/7	Method Blank	Total/NA	Water	SM 4500 NH3 D	
LCS 240-331046/8	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	

Analysis Batch: 331226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	SM4500 P E-1999	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	SM4500 P E-1999	
MB 240-331226/3	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-331226/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	
240-96473-2 MS	W-12610-060118-SSH-18102	Total/NA	Water	SM4500 P E-1999	
240-96473-2 MSD	W-12610-060118-SSH-18102	Total/NA	Water	SM4500 P E-1999	

Analysis Batch: 331854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	1664A	

General Chemistry (Continued)

Analysis Batch: 331854 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	1664A	
MB 240-331854/1	Method Blank	Total/NA	Water	1664A	
LCS 240-331854/2	Lab Control Sample	Total/NA	Water	1664A	

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

Lab Sample ID: MB 240-329974/32
Matrix: Water
Analysis Batch: 329974

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	0.040	ug/L			06/05/18 04:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*69 - 120*		*06/05/18 04:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 138*		*06/05/18 04:04*	*1*
Toluene-d8 (Surr)	*103*		*73 - 120*		*06/05/18 04:04*	*1*

Lab Sample ID: LCS 240-329974/33
Matrix: Water
Analysis Batch: 329974

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	19.2		ug/L		96	10 - 251

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 138*
Toluene-d8 (Surr)	*105*		*73 - 120*

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

Lab Sample ID: MB 240-330044/12-A
Matrix: Water
Analysis Batch: 330369

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 330044

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/05/18 07:45	06/06/18 21:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*76*		*10 - 114*	*06/05/18 07:45*	*06/06/18 21:46*	*1*
Tetrachloro-m-xylene	*69*		*15 - 131*	*06/05/18 07:45*	*06/06/18 21:46*	*1*

Lab Sample ID: LCS 240-330044/13-A
Matrix: Water
Analysis Batch: 330369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 330044

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.71		ug/L		69	50 - 114
Aroclor-1260	2.50	1.93		ug/L		77	8 - 127

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

Lab Sample ID: LCS 240-330044/13-A
Matrix: Water
Analysis Batch: 330369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 330044

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*78*		*10 - 114*
Tetrachloro-m-xylene	*68*		*15 - 131*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-329854/1-A
Matrix: Water
Analysis Batch: 331132

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 329854

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/04/18 14:00	06/11/18 18:16	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/04/18 14:00	06/11/18 18:16	1
Chromium	5.0	U	5.0	0.63	ug/L		06/04/18 14:00	06/11/18 18:16	1
Copper	20	U	20	3.5	ug/L		06/04/18 14:00	06/11/18 18:16	1
Iron	100	U	100	26	ug/L		06/04/18 14:00	06/11/18 18:16	1
Nickel	20	U	20	2.2	ug/L		06/04/18 14:00	06/11/18 18:16	1
Lead	3.0	U	3.0	2.8	ug/L		06/04/18 14:00	06/11/18 18:16	1

Lab Sample ID: LCS 240-329854/2-A
Matrix: Water
Analysis Batch: 331132

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 329854

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	51.0		ug/L		102	85 - 115
Cadmium	50.0	51.6		ug/L		103	85 - 115
Chromium	200	196		ug/L		98	85 - 115
Copper	250	248		ug/L		99	85 - 115
Iron	1000	1090		ug/L		109	85 - 115
Nickel	500	515		ug/L		103	85 - 115
Lead	500	492		ug/L		98	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-329860/1-A
Matrix: Water
Analysis Batch: 330279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 329860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/04/18 12:00	06/05/18 14:14	1

Lab Sample ID: LCS 240-329860/2-A
Matrix: Water
Analysis Batch: 330279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 329860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.43		ug/L		109	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-331854/1
Matrix: Water
Analysis Batch: 331854

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	1.0	mg/L			06/15/18 10:17	1

Lab Sample ID: LCS 240-331854/2
Matrix: Water
Analysis Batch: 331854

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	39.10		mg/L		98	78 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-330950/9
Matrix: Water
Analysis Batch: 330950

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	4.1	mg/L			06/11/18 11:09	1

Lab Sample ID: LCS 240-330950/10
Matrix: Water
Analysis Batch: 330950

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	49.6	44.8		mg/L		90	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-329746/2
Matrix: Water
Analysis Batch: 329746

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	9.19	9.2		SU		100	97 - 103

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

Lab Sample ID: SCB 240-329747/2
Matrix: Water
Analysis Batch: 329747

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	1.46	J s	2.0	1.2	mg/L			06/02/18 10:23	1

Method: 5210B-2001 - BOD, 5-Day (Continued)

Lab Sample ID: USB 240-329747/1
Matrix: Water
Analysis Batch: 329747

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			06/02/18 10:21	1

Lab Sample ID: LCS 240-329747/3
Matrix: Water
Analysis Batch: 329747

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	194		mg/L		98	85 - 115

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

Lab Sample ID: MB 240-330472/1
Matrix: Water
Analysis Batch: 330472

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	2.2	mg/L			06/07/18 09:20	1

Lab Sample ID: LCS 240-330472/2
Matrix: Water
Analysis Batch: 330472

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	33.7	26.0		mg/L		77	64 - 120

Lab Sample ID: 240-96473-1 DU
Matrix: Water
Analysis Batch: 330472

Client Sample ID: W-12610-060118-SSH-18101
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: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 240-331046/7
Matrix: Water
Analysis Batch: 331046

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	0.093	mg/L			06/11/18 08:03	1

Lab Sample ID: LCS 240-331046/8
Matrix: Water
Analysis Batch: 331046

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	5.00	4.64		mg/L		93	85 - 114

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-331226/3
Matrix: Water
Analysis Batch: 331226

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	0.037	mg/L			06/12/18 10:56	1

Lab Sample ID: LCS 240-331226/4
Matrix: Water
Analysis Batch: 331226

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			0.447	0.458		mg/L		102	77 - 120		

Lab Sample ID: 240-96473-2 MS
Matrix: Water
Analysis Batch: 331226

Client Sample ID: W-12610-060118-SSH-18102
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Phosphorus as P	0.10	U	0.500	0.486		mg/L		97	38 - 156		

Lab Sample ID: 240-96473-2 MSD
Matrix: Water
Analysis Batch: 331226

Client Sample ID: W-12610-060118-SSH-18102
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	0.10	U	0.500	0.485		mg/L		97	38 - 156	0	29

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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	(69-120)	(61-138)	(73-120)
240-96473-1	W-12610-060118-SSH-18101	101	110	112
240-96473-2	W-12610-060118-SSH-18102	102	107	113
LCS 240-329974/33	Lab Control Sample	97	91	105
MB 240-329974/32	Method Blank	95	94	103

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)	
		DCBP1	TCX1
Lab Sample ID	Client Sample ID	(10-114)	(15-131)
240-96473-1	W-12610-060118-SSH-18101	69	64
240-96473-2	W-12610-060118-SSH-18102	79	66
LCS 240-330044/13-A	Lab Control Sample	78	68
MB 240-330044/12-A	Method Blank	76	69

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Client Sample ID: W-12610-060118-SSH-18101

Lab Sample ID: 240-96473-1

Date Collected: 06/01/18 09:15

Matrix: Water

Date Received: 06/02/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	329974	06/05/18 07:08	TJL1	TAL CAN
Total/NA	Prep	608			330044	06/05/18 07:45	WKD	TAL CAN
Total/NA	Analysis	608		1	330369	06/06/18 23:43	KMG	TAL CAN
Total Recoverable	Prep	200.7			329854	06/04/18 14:00	MBB	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	331132	06/11/18 20:00	KLC	TAL CAN
Total/NA	Prep	245.1			329860	06/04/18 12:00	MBB	TAL CAN
Total/NA	Analysis	245.1		1	330279	06/05/18 14:33	AJC	TAL CAN
Total/NA	Analysis	1664A		1	331854	06/15/18 10:17	JESW	TAL CAN
Total/NA	Analysis	410.4		1	330950	06/11/18 11:40	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	329746	06/02/18 10:53	LKG	TAL CAN
Total/NA	Analysis	5210B-2001		1	329747	06/02/18 11:13	LKG	TAL CAN
Total/NA	Analysis	SM 2540D		1	330472	06/07/18 09:20	MMM	TAL CAN
Total/NA	Analysis	SM 4500 NH3 D		1	331046	06/11/18 10:45	JAS	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	331226	06/12/18 11:54	TPH	TAL CAN

Client Sample ID: W-12610-060118-SSH-18102

Lab Sample ID: 240-96473-2

Date Collected: 06/01/18 09:20

Matrix: Water

Date Received: 06/02/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	329974	06/05/18 07:31	TJL1	TAL CAN
Total/NA	Prep	608			330044	06/05/18 07:45	WKD	TAL CAN
Total/NA	Analysis	608		1	330369	06/07/18 00:03	KMG	TAL CAN
Total Recoverable	Prep	200.7			329854	06/04/18 14:00	MBB	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	331132	06/11/18 20:04	KLC	TAL CAN
Total/NA	Prep	245.1			329860	06/04/18 12:00	MBB	TAL CAN
Total/NA	Analysis	245.1		1	330279	06/05/18 14:35	AJC	TAL CAN
Total/NA	Analysis	1664A		1	331854	06/15/18 10:17	JESW	TAL CAN
Total/NA	Analysis	410.4		1	330950	06/11/18 11:41	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	329746	06/02/18 10:55	LKG	TAL CAN
Total/NA	Analysis	5210B-2001		1	329747	06/02/18 11:20	LKG	TAL CAN
Total/NA	Analysis	SM 2540D		1	330472	06/07/18 09:20	MMM	TAL CAN
Total/NA	Analysis	SM 4500 NH3 D		1	331046	06/11/18 10:48	JAS	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	331226	06/12/18 11:58	TPH	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-18 *
Illinois	NELAP	5	200004	07-31-18 *
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18 *
Nevada	State Program	9	OH-000482008A	07-31-18 *
New Jersey	NELAP	2	OH001	06-30-18 *
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-18 *
Texas	NELAP	6	T104704517-17-9	08-31-18 *
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18 *
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

1.6/C1.7
1.8/C1.9

Chain of Custody Record

267206

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: JE Pardys	Site Contact: JE Pardys	Date: 6/1/18	COC No: 267206
Company Name: GHD	Tel/Fax: 519 340 4316	Lab Contact: D. Hechler	Carrier: FedEx	1 of 1 COCs
Address: 26850 Haggerty Rd	Analysis Turnaround Time			Sampler: S. Hoeyemeyer
City/State/Zip: Farmington Hills MI	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone: 248 553 34001	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: RaceTrust Bay City				Job / SDG No.:
Site: SSOW 12610-104-02				
PO# 24006288				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	metals	ammonia	COD	T. Phosphorus	vinyl chloride	PCBs	BOD	pH	TSS	HEM	Sample Specific Notes:
W-12610-060118-SSH-IB101	6/1/18	0915	C, G	W	11	N	N	X	X	X	X	X	X	X	X	X	X	
W-12610-060118-SSH-IB102	6/1/18	0920	C, G	W	11	N	N	X	X	X	X	X	X	X	X	X	X	

240-96473 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1,2,3,4

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 228430, 228429	Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	GHD	6/1/18 1400	[signature]	TAL	6-2-18 935
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

6/15/2018

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 96473**
Canton Facility

Client GHD Site Name —

Cooler Received on 6-2-18 Opened on 6-2-18

Cooler unpacked by: BOF

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 ~~N/A~~ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF +0.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   ~~IR GUN # 627 (CF -1.3°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 be reconciled with the COC?	Yes No	
9. Were correct bottle(s) used for the test(s) indicated?	Yes No	
10. Sufficient quantity received to perform indicated analyses?	Yes No	
11. Are these work share samples?	Yes No	
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	NA pH Strip Lot# **HC740840**
13. Were VOAs on the COC?	Yes No	
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No	NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes No	
16. 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 _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: BOF

18. 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)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # : 96473**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA	8	1.6	1.7	ICE
1	1	1.8	1.9	1

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
W-12610-060118-SSH-18101	240-96473-E-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-060118-SSH-18101	240-96473-F-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-060118-SSH-18101	240-96473-J-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-060118-SSH-18101	240-96473-K-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-060118-SSH-18102	240-96473-E-2	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-060118-SSH-18102	240-96473-F-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-060118-SSH-18102	240-96473-J-2	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-060118-SSH-18102	240-96473-K-2	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-100221-1
Client Project/Site: 12610A-T04, 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:
8/29/2018 3:18:56 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

Job ID: 240-100221-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-100221-1

Comments
No additional comments.

Receipt
The samples were received on 8/22/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4º C, 2.6º C and 3.0º C.

GC Semi VOA
Method(s) 8082A: The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-12610A-082018-SSH-18104 (240-100221-2). The samples have been quantified and reported using the best overall Aroclor/standard pattern match.

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-12610A-082018-SSH-18103 (240-100221-1), GW-12610A-082018-SSH-18104 (240-100221-2), GW-12610A-082018-SSH-18105 (240-100221-3), GW-12610A-082018-SSH-18106 (240-100221-4), GW-12610A-082018-SSH-18107 (240-100221-5), GW-12610A-082018-SSH-18108 (240-100221-6), GW-12610A-082018-SSH-18108 (240-100221-6[MS]), GW-12610A-082018-SSH-18108 (240-100221-6[MSD]), GW-12610A-082118-SSH-18110 (240-100221-8) and GW-12610A-082118-SSH-18111 (240-100221-9). 3760438, 3449341, 3715675.

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-12610A-082018-SSH-18109 (240-100221-7). 3760440, 3449340, 3715674.

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

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

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Sample Summary

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-100221-1	GW-12610A-082018-SSH-18103	Water	08/20/18 09:21	08/22/18 09:20
240-100221-2	GW-12610A-082018-SSH-18104	Water	08/20/18 10:06	08/22/18 09:20
240-100221-3	GW-12610A-082018-SSH-18105	Water	08/20/18 10:11	08/22/18 09:20
240-100221-4	GW-12610A-082018-SSH-18106	Water	08/20/18 11:01	08/22/18 09:20
240-100221-5	GW-12610A-082018-SSH-18107	Water	08/20/18 12:01	08/22/18 09:20
240-100221-6	GW-12610A-082018-SSH-18108	Water	08/20/18 13:16	08/22/18 09:20
240-100221-7	GW-12610A-082018-SSH-18109	Water	08/20/18 14:05	08/22/18 09:20
240-100221-8	GW-12610A-082118-SSH-18110	Water	08/21/18 08:51	08/22/18 09:20
240-100221-9	GW-12610A-082118-SSH-18111	Water	08/21/18 10:01	08/22/18 09:20

Detection Summary

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

Client Sample ID: GW-12610A-082018-SSH-18103 — Lab Sample ID: 240-100221-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.56		0.19	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-12610A-082018-SSH-18104 — Lab Sample ID: 240-100221-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.21		0.19	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-12610A-082018-SSH-18105 — Lab Sample ID: 240-100221-3

No Detections.

Client Sample ID: GW-12610A-082018-SSH-18106 — Lab Sample ID: 240-100221-4

No Detections.

Client Sample ID: GW-12610A-082018-SSH-18107 — Lab Sample ID: 240-100221-5

No Detections.

Client Sample ID: GW-12610A-082018-SSH-18108 — Lab Sample ID: 240-100221-6

No Detections.

Client Sample ID: GW-12610A-082018-SSH-18109 — Lab Sample ID: 240-100221-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	2.5		0.95	0.36	ug/L	5		8082A	Total/NA

Client Sample ID: GW-12610A-082118-SSH-18110 — Lab Sample ID: 240-100221-8

No Detections.

Client Sample ID: GW-12610A-082118-SSH-18111 — Lab Sample ID: 240-100221-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.32		0.19	0.073	ug/L	1		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
3520C	Liquid-Liquid Extraction (Continuous)	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 = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18103
Date Collected: 08/20/18 09:21
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.053	ug/L		08/23/18 07:17	08/25/18 12:04	1
Aroclor-1221	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 12:04	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/23/18 07:17	08/25/18 12:04	1
Aroclor-1242	**0.56**		0.19	0.072	ug/L		08/23/18 07:17	08/25/18 12:04	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 12:04	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 12:04	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*53*		*22 - 120*	*08/23/18 07:17*	*08/25/18 12:04*	*1*
DCB Decachlorobiphenyl	*23*		*10 - 120*	*08/23/18 07:17*	*08/25/18 12:04*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18104
Date Collected: 08/20/18 10:06
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.053	ug/L		08/23/18 07:17	08/25/18 12:21	1
Aroclor-1221	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 12:21	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/23/18 07:17	08/25/18 12:21	1
Aroclor-1242	**0.21**		0.19	0.072	ug/L		08/23/18 07:17	08/25/18 12:21	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 12:21	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 12:21	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*22 - 120*	*08/23/18 07:17*	*08/25/18 12:21*	*1*
DCB Decachlorobiphenyl	*24*		*10 - 120*	*08/23/18 07:17*	*08/25/18 12:21*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18105
Date Collected: 08/20/18 10:11
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 12:39	1
Aroclor-1221	0.19	U	0.19	0.055	ug/L		08/23/18 07:17	08/25/18 12:39	1
Aroclor-1232	0.19	U	0.19	0.071	ug/L		08/23/18 07:17	08/25/18 12:39	1
Aroclor-1242	0.19	U	0.19	0.073	ug/L		08/23/18 07:17	08/25/18 12:39	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 12:39	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 12:39	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*22 - 120*	*08/23/18 07:17*	*08/25/18 12:39*	*1*
DCB Decachlorobiphenyl	*20*		*10 - 120*	*08/23/18 07:17*	*08/25/18 12:39*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18106
Date Collected: 08/20/18 11:01
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 12:56	1
Aroclor-1221	0.19	U	0.19	0.055	ug/L		08/23/18 07:17	08/25/18 12:56	1
Aroclor-1232	0.19	U	0.19	0.072	ug/L		08/23/18 07:17	08/25/18 12:56	1
Aroclor-1242	0.19	U	0.19	0.074	ug/L		08/23/18 07:17	08/25/18 12:56	1
Aroclor-1248	0.19	U	0.19	0.049	ug/L		08/23/18 07:17	08/25/18 12:56	1
Aroclor-1254	0.19	U	0.19	0.039	ug/L		08/23/18 07:17	08/25/18 12:56	1
Aroclor-1260	0.19	U	0.19	0.045	ug/L		08/23/18 07:17	08/25/18 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*22 - 120*	*08/23/18 07:17*	*08/25/18 12:56*	*1*
DCB Decachlorobiphenyl	*43*		*10 - 120*	*08/23/18 07:17*	*08/25/18 12:56*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18107
Date Collected: 08/20/18 12:01
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 13:14	1
Aroclor-1221	0.19	U	0.19	0.055	ug/L		08/23/18 07:17	08/25/18 13:14	1
Aroclor-1232	0.19	U	0.19	0.071	ug/L		08/23/18 07:17	08/25/18 13:14	1
Aroclor-1242	0.19	U	0.19	0.073	ug/L		08/23/18 07:17	08/25/18 13:14	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 13:14	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 13:14	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 13:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*22 - 120*	*08/23/18 07:17*	*08/25/18 13:14*	*1*
DCB Decachlorobiphenyl	*11*		*10 - 120*	*08/23/18 07:17*	*08/25/18 13:14*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18108
Date Collected: 08/20/18 13:16
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.053	ug/L		08/23/18 07:17	08/25/18 13:31	1
Aroclor-1221	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 13:31	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/23/18 07:17	08/25/18 13:31	1
Aroclor-1242	0.19	U	0.19	0.072	ug/L		08/23/18 07:17	08/25/18 13:31	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 13:31	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 13:31	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*22 - 120*	*08/23/18 07:17*	*08/25/18 13:31*	*1*
DCB Decachlorobiphenyl	*30*		*10 - 120*	*08/23/18 07:17*	*08/25/18 13:31*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082018-SSH-18109
Date Collected: 08/20/18 14:05
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.95	U	0.95	0.27	ug/L		08/23/18 07:17	08/28/18 20:04	5
Aroclor-1221	0.95	U	0.95	0.27	ug/L		08/23/18 07:17	08/28/18 20:04	5
Aroclor-1232	0.95	U	0.95	0.35	ug/L		08/23/18 07:17	08/28/18 20:04	5
Aroclor-1242	**2.5**		0.95	0.36	ug/L		08/23/18 07:17	08/28/18 20:04	5
Aroclor-1248	0.95	U	0.95	0.24	ug/L		08/23/18 07:17	08/28/18 20:04	5
Aroclor-1254	0.95	U	0.95	0.19	ug/L		08/23/18 07:17	08/28/18 20:04	5
Aroclor-1260	0.95	U	0.95	0.22	ug/L		08/23/18 07:17	08/28/18 20:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*22 - 120*	*08/23/18 07:17*	*08/28/18 20:04*	*5*
DCB Decachlorobiphenyl	*14*		*10 - 120*	*08/23/18 07:17*	*08/28/18 20:04*	*5*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082118-SSH-18110
Date Collected: 08/21/18 08:51
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.053	ug/L		08/23/18 07:17	08/25/18 14:41	1
Aroclor-1221	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 14:41	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/23/18 07:17	08/25/18 14:41	1
Aroclor-1242	0.19	U	0.19	0.072	ug/L		08/23/18 07:17	08/25/18 14:41	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 14:41	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 14:41	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*22 - 120*	*08/23/18 07:17*	*08/25/18 14:41*	*1*
DCB Decachlorobiphenyl	*41*		*10 - 120*	*08/23/18 07:17*	*08/25/18 14:41*	*1*

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

Client Sample ID: GW-12610A-082118-SSH-18111
Date Collected: 08/21/18 10:01
Date Received: 08/22/18 09:20

Lab Sample ID: 240-100221-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.054	ug/L		08/23/18 07:17	08/25/18 14:58	1
Aroclor-1221	0.19	U	0.19	0.055	ug/L		08/23/18 07:17	08/25/18 14:58	1
Aroclor-1232	0.19	U	0.19	0.071	ug/L		08/23/18 07:17	08/25/18 14:58	1
Aroclor-1242	**0.32**		0.19	0.073	ug/L		08/23/18 07:17	08/25/18 14:58	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/23/18 07:17	08/25/18 14:58	1
Aroclor-1254	0.19	U	0.19	0.038	ug/L		08/23/18 07:17	08/25/18 14:58	1
Aroclor-1260	0.19	U	0.19	0.044	ug/L		08/23/18 07:17	08/25/18 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*22 - 120*	*08/23/18 07:17*	*08/25/18 14:58*	*1*
DCB Decachlorobiphenyl	*25*		*10 - 120*	*08/23/18 07:17*	*08/25/18 14:58*	*1*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

GC Semi VOA

Prep Batch: 342159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-100221-1	GW-12610A-082018-SSH-18103	Total/NA	Water	3520C	
240-100221-2	GW-12610A-082018-SSH-18104	Total/NA	Water	3520C	
240-100221-3	GW-12610A-082018-SSH-18105	Total/NA	Water	3520C	
240-100221-4	GW-12610A-082018-SSH-18106	Total/NA	Water	3520C	
240-100221-5	GW-12610A-082018-SSH-18107	Total/NA	Water	3520C	
240-100221-6	GW-12610A-082018-SSH-18108	Total/NA	Water	3520C	
240-100221-7	GW-12610A-082018-SSH-18109	Total/NA	Water	3520C	
240-100221-8	GW-12610A-082118-SSH-18110	Total/NA	Water	3520C	
240-100221-9	GW-12610A-082118-SSH-18111	Total/NA	Water	3520C	
MB 240-342159/20-A	Method Blank	Total/NA	Water	3520C	
LCS 240-342159/21-A	Lab Control Sample	Total/NA	Water	3520C	
240-100221-6 MS	GW-12610A-082018-SSH-18108	Total/NA	Water	3520C	
240-100221-6 MSD	GW-12610A-082018-SSH-18108	Total/NA	Water	3520C	

Analysis Batch: 342499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-100221-1	GW-12610A-082018-SSH-18103	Total/NA	Water	8082A	342159
240-100221-2	GW-12610A-082018-SSH-18104	Total/NA	Water	8082A	342159
240-100221-3	GW-12610A-082018-SSH-18105	Total/NA	Water	8082A	342159
240-100221-4	GW-12610A-082018-SSH-18106	Total/NA	Water	8082A	342159
240-100221-5	GW-12610A-082018-SSH-18107	Total/NA	Water	8082A	342159
240-100221-6	GW-12610A-082018-SSH-18108	Total/NA	Water	8082A	342159
240-100221-8	GW-12610A-082118-SSH-18110	Total/NA	Water	8082A	342159
240-100221-9	GW-12610A-082118-SSH-18111	Total/NA	Water	8082A	342159
MB 240-342159/20-A	Method Blank	Total/NA	Water	8082A	342159
LCS 240-342159/21-A	Lab Control Sample	Total/NA	Water	8082A	342159
240-100221-6 MS	GW-12610A-082018-SSH-18108	Total/NA	Water	8082A	342159
240-100221-6 MSD	GW-12610A-082018-SSH-18108	Total/NA	Water	8082A	342159

Analysis Batch: 342748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-100221-7	GW-12610A-082018-SSH-18109	Total/NA	Water	8082A	342159

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

Lab Sample ID: MB 240-342159/20-A
Matrix: Water
Analysis Batch: 342499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 342159

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.056	ug/L		08/23/18 07:17	08/25/18 11:12	1
Aroclor-1221	0.20	U	0.20	0.057	ug/L		08/23/18 07:17	08/25/18 11:12	1
Aroclor-1232	0.20	U	0.20	0.074	ug/L		08/23/18 07:17	08/25/18 11:12	1
Aroclor-1242	0.20	U	0.20	0.076	ug/L		08/23/18 07:17	08/25/18 11:12	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		08/23/18 07:17	08/25/18 11:12	1
Aroclor-1254	0.20	U	0.20	0.040	ug/L		08/23/18 07:17	08/25/18 11:12	1
Aroclor-1260	0.20	U	0.20	0.046	ug/L		08/23/18 07:17	08/25/18 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*22 - 120*	*08/23/18 07:17*	*08/25/18 11:12*	*1*
DCB Decachlorobiphenyl	*66*		*10 - 120*	*08/23/18 07:17*	*08/25/18 11:12*	*1*

Lab Sample ID: LCS 240-342159/21-A
Matrix: Water
Analysis Batch: 342499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 342159

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			2.50	1.80		ug/L		72	28 - 120		
Aroclor-1260			2.50	2.03		ug/L		81	30 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*67*		*22 - 120*
DCB Decachlorobiphenyl	*72*		*10 - 120*

Lab Sample ID: 240-100221-6 MS
Matrix: Water
Analysis Batch: 342499

Client Sample ID: GW-12610A-082018-SSH-18108
Prep Type: Total/NA
Prep Batch: 342159

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016	0.19	U	2.40	1.59		ug/L		66	14 - 120		
Aroclor-1260	0.19	U	2.40	1.78		ug/L		74	10 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*64*		*22 - 120*
DCB Decachlorobiphenyl	*31*		*10 - 120*

Lab Sample ID: 240-100221-6 MSD
Matrix: Water
Analysis Batch: 342499

Client Sample ID: GW-12610A-082018-SSH-18108
Prep Type: Total/NA
Prep Batch: 342159

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	0.19	U	2.38	1.62		ug/L		68	14 - 120	2	30
Aroclor-1260	0.19	U	2.38	1.77		ug/L		74	10 - 120	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*67*		*22 - 120*
DCB Decachlorobiphenyl	*19*		*10 - 120*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (22-120)	DCBP1 (10-120)
240-100221-1	GW-12610A-082018-SSH-1810	53	23
240-100221-2	GW-12610A-082018-SSH-181 04	61	24
240-100221-3	GW-12610A-082018-SSH-181 05	56	20
240-100221-4	GW-12610A-082018-SSH-181 06	71	43
240-100221-5	GW-12610A-082018-SSH-181 07	56	11
240-100221-6	GW-12610A-082018-SSH-181 08	69	30
240-100221-6 MS	GW-12610A-082018-SSH-181 08	64	31
240-100221-6 MSD	GW-12610A-082018-SSH-181 08	67	19
240-100221-8	GW-12610A-082118-SSH-181 10	66	41
240-100221-9	GW-12610A-082118-SSH-181 11	64	25
LCS 240-342159/21-A	Lab Control Sample	67	72
MB 240-342159/20-A	Method Blank	75	66

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)	
Lab Sample ID	Client Sample ID	TCX2 (22-120)	DCBP2 (10-120)
240-100221-7	GW-12610A-082018-SSH-1810	54	14

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Client Sample ID: GW-12610A-082018-SSH-18103 — Lab Sample ID: 240-100221-1

Date Collected: 08/20/18 09:21 — **Matrix: Water**
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 12:04	CSC	TAL CAN

Client Sample ID: GW-12610A-082018-SSH-18104 — Lab Sample ID: 240-100221-2

Date Collected: 08/20/18 10:06 — **Matrix: Water**
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 12:21	CSC	TAL CAN

Client Sample ID: GW-12610A-082018-SSH-18105 — Lab Sample ID: 240-100221-3

Date Collected: 08/20/18 10:11 — **Matrix: Water**
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 12:39	CSC	TAL CAN

Client Sample ID: GW-12610A-082018-SSH-18106 — Lab Sample ID: 240-100221-4

Date Collected: 08/20/18 11:01 — **Matrix: Water**
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 12:56	CSC	TAL CAN

Client Sample ID: GW-12610A-082018-SSH-18107 — Lab Sample ID: 240-100221-5

Date Collected: 08/20/18 12:01 — **Matrix: Water**
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 13:14	CSC	TAL CAN

Client Sample ID: GW-12610A-082018-SSH-18108 — Lab Sample ID: 240-100221-6

Date Collected: 08/20/18 13:16 — **Matrix: Water**
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 13:31	CSC	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

Client Sample ID: GW-12610A-082018-SSH-18109

Lab Sample ID: 240-100221-7

Date Collected: 08/20/18 14:05
Matrix: Water
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		5	342748	08/28/18 20:04	KMG	TAL CAN

Client Sample ID: GW-12610A-082118-SSH-18110

Lab Sample ID: 240-100221-8

Date Collected: 08/21/18 08:51
Matrix: Water
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 14:41	CSC	TAL CAN

Client Sample ID: GW-12610A-082118-SSH-18111

Lab Sample ID: 240-100221-9

Date Collected: 08/21/18 10:01
Matrix: Water
Date Received: 08/22/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			342159	08/23/18 07:17	SDE	TAL CAN
Total/NA	Analysis	8082A		1	342499	08/25/18 14:58	CSC	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12610A-T04, RACER Bay City

TestAmerica Job ID: 240-100221-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-18 *
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-17-9	08-31-18 *
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18 *
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

2.6/C2.6
3.0/C3.0
2.4/C2.4

Chain of Custody Record

267205

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: JE Pardys	Site Contact: JE Pardys	Date: 8/21/18	COC No: 267205
Company Name: GHD	Tel/Fax: 519 340 4316	Lab Contact: D. Heckler	Carrier: FedEx	1 of 1 COCs
Address: 26850 Haggerty Rd	Analysis Turnaround Time			Sampler: S. Hockemeyer
City/State/Zip: Farmington Hills MI 48331	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone: 248 893 3400	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: RacoTrust Bay City	☐ 1 week			Job / SDG No.:
Site: 550W 1261DA-2018-01	☐ 2 days			
PO # 240062888	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	PCBs	Sample Specific Notes:
GW-1261DA-082018-SSH-18103	8/20/18	0921	G	GW	2	N	N		
-18104		1006	G	GW	2	N	N		
-18105		1011	G	GW	2	N	N		
-18106		1101	G	GW	2	N	N		
-18107		1201	G	GW	2	N	N		
-18108		1316	G	GW	4	N	Y		MS/MSD
-18109		1405	G	GW	2	N	N		
GW-1261DA-082118-SSH-18110	8/21/18	0851	G	GW	2	N	N		
GW-1261DA-082118-SSH-18111	8/21/18	1001	G	GW	2	N	N		

240-100221 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 143109, 143110, 138868	Cooler Temp. (°C): Obs'd: ____	Corr'd: ____	Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	GHD	8/24/18 1600	BOP	TAL	8-22-18 920
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

8/29/2018

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 100221
Canton Facility

Client GHD Site Name — Cooler unpacked by: BP

Cooler Received on 8-22-18 Opened on 8-22-18

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 N/A See Multiple Cooler Form
   IR GUN# IR-8 (CF **+0** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF **-0.3**°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 be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC849161**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. 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 _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: BP

18. 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)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

WI-NC-099

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 100221

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA	8	2.6	2.6	ICE
		3.0	3.0	
		2.4	2.4	