



January 16, 2017

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: 2016 Annual Technical Progress Report Submittal
RACER Trust Bay City Powertrain Industrial Lands**

Enclosed is the 2016 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 time period from November 16, 2015 through November 15, 2016, 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 Operation, Maintenance, and Monitoring Plan (OM&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 OM&M Plan after the commissioning of the treatment system in April 2015 and a revised OM&M manual was submitted on behalf of RACER to MDEQ for review on November 14, 2016.

1.1.2 Operation and Maintenance Activities–Groundwater Extraction System

Table 1 presents Saginaw River daily, weekly, and monthly river water level averages recorded at the United States Geological Survey (USGS) station – 04157060 Saginaw River at Midland Road in Bay City, Michigan (approximately 1 mile upstream of the Site). Extraction well details and water elevations are presented in Table 2. Groundwater Monitoring well details and water elevations are presented in Table 3. 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 directed 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. On limited occasions, when the groundwater treatment system was not operating the water level in the CSC was lowered by operation of a sump pump in CSC extraction well EW-14, which discharged extracted water to a nearby catch basin that drains to the GM LLC stormwater treatment system, where it is treated. The groundwater level in the MSA continued to be lowered even though the treatment system was down, since the pumps in the MSA extraction wells EW-6, EW-8, and EW-12 continued to operate and discharge to EW-15, where the water level was lowered through the operation of the sump pump in EW-14, (CSC is hydraulically well connected). It is noted that GM LLC is aware of the discharge to their system and acknowledges this discharge in their annual report.

1.1.3 Operation and Maintenance Activities – Groundwater Treatment System

From April 2015, when the groundwater treatment system was fully commissioned, through November 15, 2016 approximately 577,976 gallons of groundwater were treated and discharged to the



City of Bay City under Industrial User Discharge Permit (120807). Semi-annual discharge compliance sampling was completed on December 10, 2015 and June 14, 2016. There were no exceedances of permit discharge standards observed, as presented in Table 4.

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. USGS station 04157060 is approximately 1 mile upstream of the Site.

Based on the combined NOAA and USGS data from 1977 to November 15, 2016, the average Saginaw River water level is approximately 578.88 feet (ft) above mean sea level (AMSL). Recent water levels were above the average, as the current water level at Midland Road measured on November 15, 2016 was 578.96 ft AMSL.

1.1.5 Extraction System/Groundwater Monitoring Activities

Table 5 presents the sample results for the MSA and CSC semi-annual extraction system discharge samples (i.e., the groundwater treatment system influent). The sixteenth annual groundwater sampling event (August 2016) was also conducted during this reporting period. Table 6 presents the sixteenth annual groundwater sampling event analytical results summary. Table 4 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 groundwater elevations are monitored. Groundwater elevations are presented in Tables 2 and 3 for extraction wells and monitoring wells, respectively. Groundwater elevations collected on December 8, 2016 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 2016 and data validation for the 2016 annual sampling event are presented in Attachment C.

A review of the past 10 years of discharge sample results reveals uniformity between the CSC and MSA discharges (PCBs are detected at low levels in each discharge) that suggests further individual sampling is not warranted.

A review of past 10 years of groundwater sample results reveals that only one location has reported concentrations above the MDEQ Part 201 Residential and Non-Residential Drinking Water Criteria of



0.5 (parts per billion) ppb and the groundwater results for the past two years reported only one location above the MDEQ Part 201 Groundwater Surface Water Interface Criteria 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. Permanent markers were reviewed and approved by the MDEQ on November 4, 2015. The permanent markers will be installed following the completion of some additional stormwater work, which is expected to be completed in 2017.

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 2017 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, 2017) and semi-annual effluent samples. The 2017 annual groundwater monitoring event will be completed in August 2017.

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



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

Sincerely,

GHD

A handwritten signature in blue ink, appearing to read 'Michael R. Tomka'.

Michael R. Tomka, P.E.

RC/kf/1

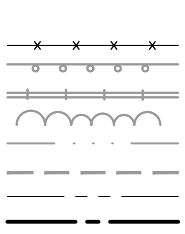
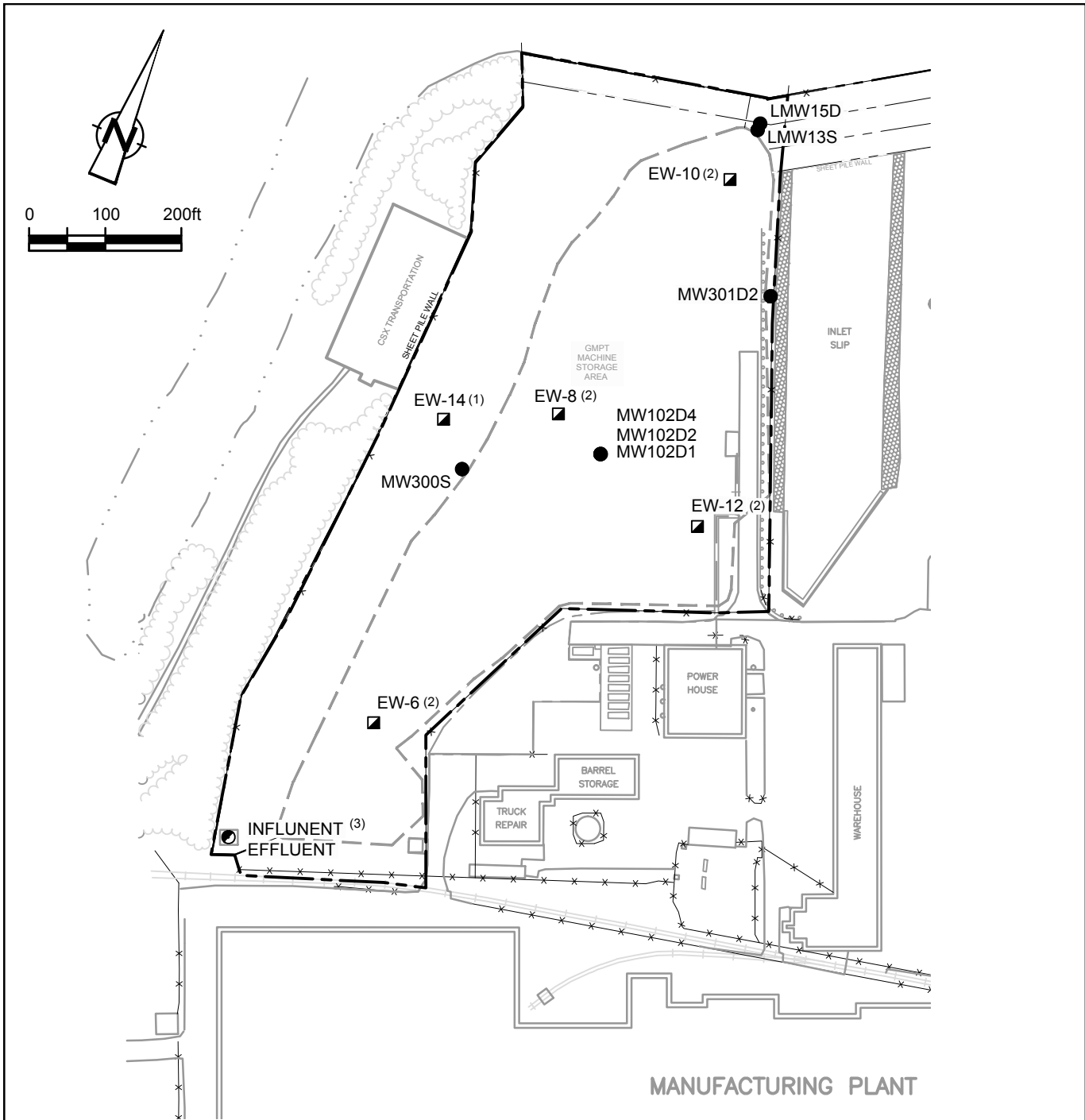
Encl.

- Figure 1 Chemical Analysis Monitoring Locations
- Figure 2 Water Elevation Monitoring Locations
- Figure 3 Shallow Groundwater Elevations– December 8, 2016

- Table 1 Saginaw River Water Levels
- Table 2 Groundwater Extraction System Water Elevations
- Table 3 Monitoring Well Completion Details and Groundwater Elevations
- Table 4 Analytical Results Summary–Groundwater Treatment System Effluent Sampling
- Table 5 Analytical Results Summary–Extraction System Sampling
- Table 6 Analytical Results Summary–Annual Sampling
- Table 7 Summary of Long-Term Groundwater and Stormwater Monitoring Activities

- Attachment A Maintenance Activity Checklists
- Attachment B Analytical Results Summary (2006 to 2016)
- Attachment C Analytical Results and Reduced Validation–2016 Annual Sampling Event

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



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
 (1) CSC SEMI-ANNUAL SAMPLING POINT
 (2) MSA SEMI-ANNUAL SAMPLING POINT (COMPOSITE)
 (3) COMBINED SAMPLE OF (1) AND (2)

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

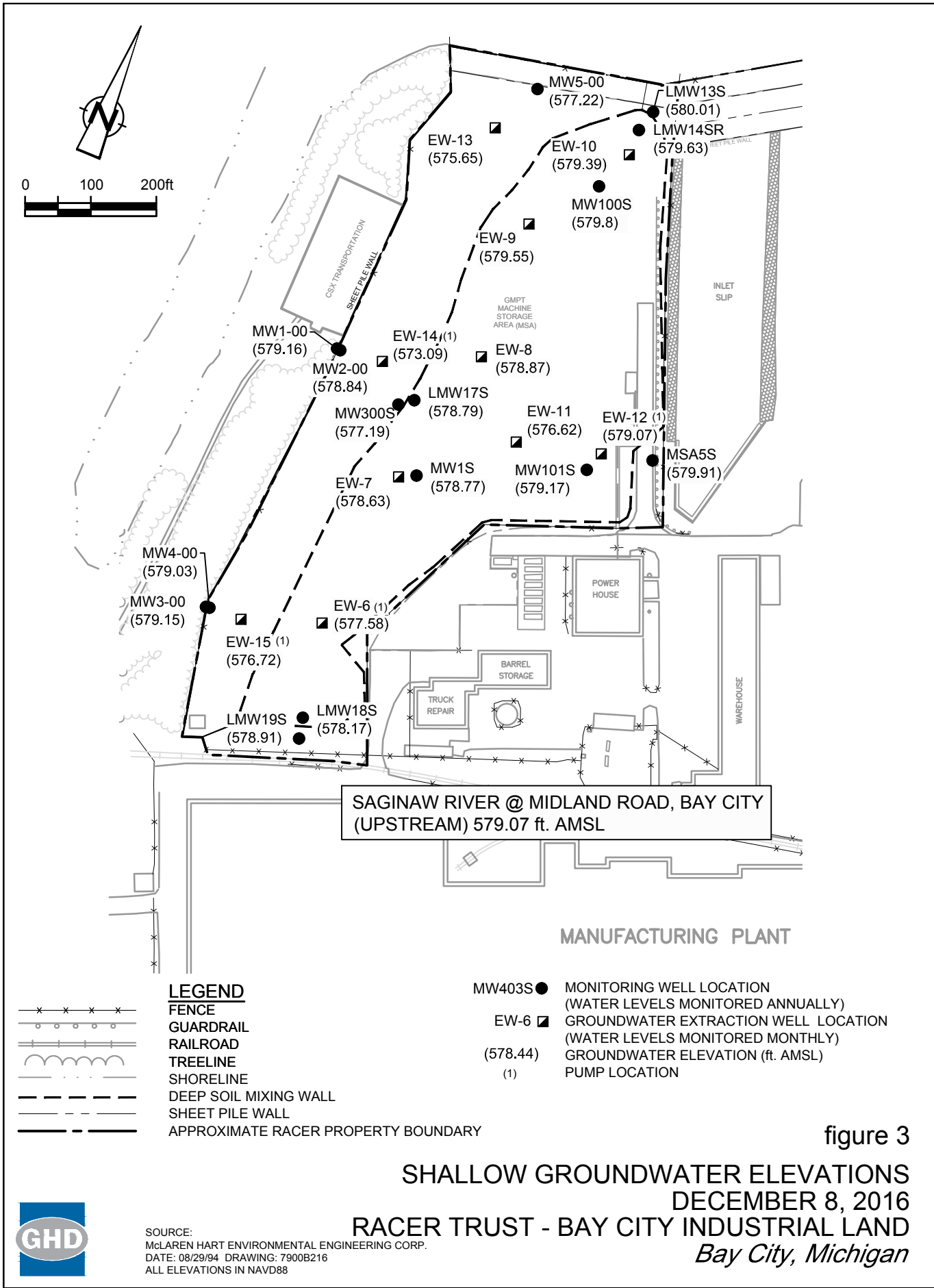


figure 3

**SHALLOW GROUNDWATER ELEVATIONS
DECEMBER 8, 2016
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

**Saginaw River Water Levels
Racer Trust - Bay City Industrial Land
Bay City, Michigan**

Location	30-Dec-15	28-Jan-16	25-Feb-16	19-Mar-16	19-Apr-16	24-May-16	29-Jun-16	20-Jul-16	31-Aug-16	30-Sep-16	28-Oct-16	11-Nov-16	8-Dec-16
USGS Station - Midland Road at Saginaw River in Bay City, MI ⁽¹⁾													
Daily Average Water Level	579.30	578.99	580.09	579.97	580.39	580.47	580.58	580.53	580.26	579.94	579.11	579.57	579.07
Weekly Average Water Level	579.60	579.26	579.65	579.71	580.22	580.32	580.53	580.41	580.34	579.94	579.36	579.41	578.96
Monthly Average Water Level	579.40	579.40	579.49	579.83	580.40	580.36	580.47	580.49	580.30	580.13	579.86	579.62	579.12

Notes:

(1) Source of Saginaw River Elevation is USGS Station (04157060) Midland Road at Saginaw River, Bay City, MI. (Provisional USGS Data, Subject to Revision)

NM Not Measured

Table 2

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

Extraction	Reference	Bottom of Well	Top ICU	Water	Water	Water	Water	Water	Water
	Elevation			Elevation	Elevation	Elevation	Elevation	Elevation	Elevation
		Elevation	Top ICU	(ft AMSL)	(ft AMSL)	(ft AMSL)	(ft AMSL)	(ft AMSL)	(ft AMSL)
	(ft AMSL)	(ft AMSL)	(ft AMSL)	Dec. 30, 2015	Jan. 28, 2016	Feb. 25, 2016	Mar. 19, 2016	Apr. 19, 2016	May 24, 2016
Machine Storage Area									
EW-6	589.74	570.39	572.39	577.71	⁽¹⁾ 577.52	577.62	577.63	577.61	587.86
EW-7	587.99	571.14	571.64	578.63	578.63	--	578.6	578.63	578.81
EW-8	588.34	572.29	573.29	574.68	574.61	574.61	578.66	⁽¹⁾ 576.43	--
EW-9	588.04	572.19	573.69	579.49	579.56	--	579.35	579.51	579.75
EW-10	587.77	570.82	572.32	579.33	579.62	--	579.33	579.7	580.06
EW-11	591.51	571.91	572.56	576.56	⁽¹⁾ 577.7	⁽¹⁾ --	576.4	⁽¹⁾ 576.1	⁽¹⁾ --
EW-12	586.42	571.57	573.07	578.43	⁽¹⁾ 577	⁽¹⁾ 578.68	⁽¹⁾ 579.31	⁽¹⁾ 578.63	⁽¹⁾ --
Crotty Street Channel Containment Area									
EW-13	584.33	571.86	NA	576.74	576	--	576.16	577.82	579.64
EW-14	582.42	569.92	NA	574.81	572.49	--	575.54	577.6	579.39
EW-15	583.71	571.61	NA	--	575.02	575.12	581.83	576.04	578.58

Notes:

- No Level recorded
- (1) Product identified in well

Table 2

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

Extraction	Reference	Bottom of Well	Top ICU	Water	Water	Water	Water	Water	Water	Water	Water	Water			
	Elevation			Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation			
	(ft AMSL)	Elevation (ft AMSL)	Top ICU (ft AMSL)	(ft AMSL) Jun. 29, 2016	(ft AMSL) Jul. 20, 2016	(ft AMSL) Aug. 31, 2016	(ft AMSL) Sept. 30, 2016	(ft AMSL) Oct. 28, 2016	(ft AMSL) Nov. 11, 2016	(ft AMSL) Dec. 8, 2016	(ft AMSL)	(ft AMSL)			
Machine Storage Area															
EW-6	589.74	570.39	572.39	576.69	(1)	577.93	574.9	(1)	574.86	574.69	(1)	574.71	(1)	577.58	
EW-7	587.99	571.14	571.64	578.56		578.55	578.63		578.58	578.55		578.56		578.63	
EW-8	588.34	572.29	573.29	(1)	578.85	574.37	576.25	(1)	576.95	(1)	576.01	(1)	575.29	(1)	578.87
EW-9	588.04	572.19	573.69	579.76		579.75	579.93		579.71	579.76		579.75		579.55	
EW-10	587.77	570.82	572.32	580.06		580.06	580.15		579.94	579.76		579.6		579.39	
EW-11	591.51	571.91	572.56	(1)	576.06	(1)	576.67	(1)	576.69	(1)	576.85	(1)	577.76	--	576.62
EW-12	586.42	571.57	573.07	(1)	578.66	(1)	578.03	(1)	578.16	(1)	578.07	(1)	578.29	(1)	579.07
Crotty Street Channel Containment Area															
EW-13	584.33	571.86	NA	579.92		580.09	576.11		575.74	576.25		576.56		575.65	
EW-14	582.42	569.92	NA	579.69		579.9	575.21		570.57	575.93		570.57		573.09	
EW-15	583.71	571.61	NA	578.82		580.58	577.92		577.45	579.75		579.13		576.72	

Notes:

- No Level recorded
- (1) Product identified in well

Table 3
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)						
							12/8/2016	8/24/2015	8/6/2014	8/6/2013	8/7/2012	8/22/2011	8/16/2010
Machine Storage Area (MSA)													
LMW13S	589.40	19.22	10	SS	PVC	2	580.01	580.10	579.43	578.61	578.19	578.03	578.71
LMW17S	589.31	19.83	10	SS	PVC	2	578.79	579.13	578.96	578.87	578.85	578.80	578.83
LMW18S	592.33	22.52	10	SS	PVC	2	578.17	578.62	578.27	577.93	577.82	577.61	577.66
LMW19S	588.61	19.32	10	SS	PVC	2	578.91	579.55	579.32	578.44	578.58	578.34	578.25
MW1S	591.08	12.95	2	SS	SS	2	578.77	578.73	578.71	578.80	578.65	578.65	578.68
MW100S	591.97	14.44	10	SS	SS	2	579.80	580.19	579.32	578.81	578.49	578.18	578.86
MW101S	593.34	19.22	10	SS	SS	2	579.17	579.12	579.01	579.10	578.94	578.80	578.93
MW102D1	594.86	30.99	10	SS	SS	2	579.30	579.88	579.39	578.34	577.90	578.71	578.39
MW102D2	594.93	36.21	10	SS	SS	2	579.37	579.86	579.38	578.31	577.89	578.69	578.37
MW102D3	594.91	46.74	10	SS	SS	2	579.25	579.83	579.35	578.27	577.84	578.67	579.34
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	579.19	579.77	579.30	578.24	577.79	578.63	578.29
MW300S	587.12	15.06	10	SS	SS	2	577.19	577.90	577.03	577.17	577.69	577.03	577.18
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	579.63	580.02	579.22	578.55	578.14	577.47	578.60
Perimeter Banks (PB)													
LMW15D	588.34	32.8	10	SS	PVC	2	579.16	579.68	579.37	578.02	577.56	578.65	578.21
MW301D1	589.54	27.50	10	SS	SS	2	577.60	578.15	577.70	576.56	578.38	579.39	578.96
MW301D2	589.16	37.24	10	SS	SS	2	577.67	578.22	577.78	576.62	577.99	579.00	578.60
MW301D3	589.22	44.04	10	SS	SS	2	577.53	578.06	577.64	576.46	577.87	578.87	578.47
MW301D4	589.33	55.95	10	SS	SS	2	577.61	578.14	577.96	576.54	578.15	579.16	578.74
Support Facilities Area (SFA)													
MSA5S	588.60	18.98			SS	2	579.91	580.26	579.67	580.22	578.58	578.67	579.10
Crotty Street Channel													
MW1-00	588.26	12.00	7	SS	SS	2	579.16	579.79	579.35	577.71	576.44	577.17	577.13
MW2-00	589.29	18.00	7	SS	SS	2	578.84	579.35	578.75	577.79	576.62	577.29	577.26
MW3-00	588.40	12.50	7	SS	SS	2	579.15	579.76	579.38	577.67	576.47	577.25	577.14
MW4-00	589.65	19.00	7	SS	SS	2	579.03	579.54	578.91	577.90	576.76	577.41	577.38
MW5-00	588.89	13.00	7	SS	SS	2	577.22	577.70	576.99	577.00	576.73	576.77	576.95
SG-1	580.00	--	--	--	--	--	n/a	n/a	581.06	n/a	n/a	n/a	n/a
Saginaw River Elevation ⁽⁶⁾							579.07	579.66	579.32	577.02	576.71	577.53	577.41

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
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)											
							8/27/2009	8/19/2008	8/20/2007	8/16/2006	8/29/2005	8/24/2004	7/28/2003	8/26/2002	8/13/2001	3/19/2001	2/23/2001	1/24/2001
Machine Storage Area (MSA)																		
LMW13S	589.40	19.22	10	SS	PVC	2	579.31	578.21	577.67	578.23	578.14	579.40	578.45	582.05	578.68	577.85	578.17	578.19
LMW17S	589.31	19.83	10	SS	PVC	2	578.81	578.58	577.58	578.63	578.31	578.80	582.73	578.91	578.68	578.74	578.83	579.06
LMW18S	592.33	22.52	10	SS	PVC	2	577.99	577.62	578.13	578.00	578.23	578.45	578.35	578.85	578.10	578.22	578.61	578.39
LMW19S	588.61	19.32	10	SS	PVC	2	578.53	578.45	579.71	578.45	578.85	579.21	579.24	579.93	578.79	579.56	579.96	579.59
MW1S	591.08	12.95	2	SS	SS	2	579.71	580.93	578.48	n/a	577.58	578.63	578.56	578.48	578.51	578.41	(5)	578.44
MW100S	591.97	14.44	10	SS	SS	2	579.27	578.40	578.01	578.38	578.57	579.15	577.27	578.91	578.93	578.36	578.64	578.87
MW101S	593.34	19.22	10	SS	SS	2	578.78	578.49	578.39	578.31	577.95	578.82	578.87	579.12	578.76	578.84	578.96	579.18
MW102D1	594.86	30.99	10	SS	SS	2	579.42	578.83	578.04	578.30	578.30	579.02	578.25	578.98	578.18	577.61	577.40	577.47
MW102D2	594.93	36.21	10	SS	SS	2	579.40	578.93	578.03	578.25	578.33	579.01	578.24	578.95	578.15	577.60	577.39	577.45
MW102D3	594.91	46.74	10	SS	SS	2	579.41	578.89	577.98	578.25	578.31	578.98	578.20	578.93	578.11	577.56	577.34	577.40
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	579.33	578.76	577.98	578.22	578.25	578.94	578.16	578.86	578.03	577.49	577.27	577.33
MW300S	587.12	15.06	10	SS	SS	2	578.22	579.26	576.30	576.81	578.34	577.05	577.77	578.53	577.00	578.84	578.67	578.99
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	579.19	577.96	576.98	577.97	577.50	576.94	578.13	578.45	578.23	577.38	577.77	577.88
Perimeter Banks (PB)																		
LMW15D	588.34	32.8	10	SS	PVC	2	579.45	578.12	577.89	578.22	578.24	579.34	578.04	578.83	578.06	577.37	577.12	577.22
MW301D1	589.54	27.50	10	SS	SS	2	579.96	579.03	578.72	578.94	579.05	580.02	578.90	579.66	578.89	578.28	578.03	578.09
MW301D2	589.16	37.24	10	SS	SS	2	579.56	578.64	578.33	578.55	578.62	579.59	578.49	579.25	578.48	577.86	577.62	577.67
MW301D3	589.22	44.04	10	SS	SS	2	579.44	578.41	578.20	578.44	578.52	579.47	578.36	579.10	578.53	577.72	577.59	577.52
MW301D4	589.33	55.95	10	SS	SS	2	579.70	578.75	578.48	578.69	578.80	579.71	578.57	579.28	578.48	577.86	577.63	577.68
Support Facilities Area (SFA)																		
MSA5S	588.60	18.98			SS	2	580.10	578.04	580.10	579.28	579.76	580.57	580.55	580.65	579.74	580.65	580.42	580.62
Crotty Street Channel																		
MW1-00	588.26	12.00	7	SS	SS	2	578.95	578.74	577.11	576.92	577.09	578.37	577.78	578.44	576.72	578.61	578.14	577.81
MW2-00	589.29	18.00	7	SS	SS	2	578.40	578.83	577.09	576.97	577.23	577.50	577.60	578.03	576.76	578.69	578.26	577.82
MW3-00	588.40	12.50	7	SS	SS	2	579.01	578.74	577.19	576.94	577.13	578.51	577.77	578.38	576.70	578.62	578.26	577.79
MW4-00	589.65	19.00	7	SS	SS	2	578.55	578.95	577.21	577.07	577.34	577.59	577.68	578.07	576.79	578.67	578.30	577.84
MW5-00	588.89	13.00	7	SS	SS	2	578.04	578.82	576.55	576.72	577.85	576.91	576.28	576.72	577.02	577.06	577.86	576.97
SG-1	580.00	--	--	--	--	--	n/a	578.55	577.83	578.33	578.43	579.63	577.93	578.73	578.12	(5)	(5)	(5)
Saginaw River Elevation ⁽⁶⁾							578.34	577.97	577.09	577.41	578.32	578.52	576.83	578.50	577.91	576.80	576.74	576.77

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
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)											
							12/15/2000	11/30/2000	10/31/2000	9/11/2000	8/29/2000	7/18/2000	6/30/2000	5/30/2000	4/26/2000	3/29/2000	2/28/2000	2/2/2000
Machine Storage Area (MSA)																		
LMW13S	589.40	19.22	10	SS	PVC	2	578.06	578.35	578.63	578.90	578.90	580.11	580.62	581.63	581.81	581.27	581.74	579.27
LMW17S	589.31	19.83	10	SS	PVC	2	578.79	579.17	578.93	579.24	579.20	579.09	579.85	580.06	580.19	579.91	579.96	579.08
LMW18S	592.33	22.52	10	SS	PVC	2	578.18	578.29	578.52	578.67	579.03	578.52	577.80	578.10	578.09	577.66	577.80	577.09
LMW19S	588.61	19.32	10	SS	PVC	2	(5)	579.56	579.38	579.34	580.13	579.45	580.56	580.96	581.25	580.73	581.39	579.70
MW1S	591.08	12.95	2	SS	SS	2	578.36	578.40	578.57	578.43	578.38	578.34	579.31	579.26	579.29	579.28	579.18	579.05
MW100S	591.97	14.44	10	SS	SS	2	578.65	579.05	579.33	579.57	579.66	579.85	578.03	577.79	577.07	576.87	576.69	577.09
MW101S	593.34	19.22	10	SS	SS	2	578.84	579.03	578.91	578.99	579.04	579.02	580.22	580.39	580.14	579.21	579.86	579.61
MW102D1	594.86	30.99	10	SS	SS	2	577.62	577.67	577.87	578.16	578.15	578.71	577.62	577.70	577.60	577.25	577.23	576.81
MW102D2	594.93	36.21	10	SS	SS	2	577.61	577.65	577.85	578.13	578.13	578.67	577.48	577.58	577.44	577.12	577.08	576.80
MW102D3	594.91	46.74	10	SS	SS	2	577.56	577.60	577.80	578.08	578.09	578.63	577.52	577.59	577.47	577.16	577.12	576.88
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	577.47	577.53	577.73	578.00	578.02	578.55	577.38	577.45	577.34	577.01	576.98	575.70
MW300S	587.12	15.06	10	SS	SS	2	578.07	578.84	578.27	578.16	578.24	n/a (2)	n/a (4)	579.89	580.18	579.73	No Access	578.55
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	577.54	578.04	578.13	578.16	578.21	579.19	579.32	579.22	578.91	578.99	578.55	578.58
Perimeter Banks (PB)																		
LMW15D	588.34	32.8	10	SS	PVC	2	577.33	577.48	577.63	577.94	578.03	578.43	n/a (4)	578.88	578.74	578.56	578.56	578.23
MW301D1	589.54	27.50	10	SS	SS	2	578.25	578.34	(5)	(5)	578.88	578.65	579.37	578.80	578.85	578.59	578.56	578.28
MW301D2	589.16	37.24	10	SS	SS	2	577.81	577.92	(5)	(5)	578.47	578.56	578.80	578.89	578.77	578.54	578.51	578.22
MW301D3	589.22	44.04	10	SS	SS	2	577.67	577.78	(5)	(5)	578.32	578.56	578.80	578.85	578.74	578.49	578.48	578.18
MW301D4	589.33	55.95	10	SS	SS	2	577.82	577.93	(5)	(5)	578.48	578.48	578.78	578.76	578.69	578.45	578.43	578.14
Support Facilities Area (SFA)																		
MSA5S	588.60	18.98			SS	2	580.46	580.65	580.34	580.56	580.41	581.32	581.17	582.22	582.37	580.62	582.13	580.96
Crotty Street Channel																		
MW1-00	588.26	12.00	7	SS	SS	2	577.49	577.75	577.45	577.36	577.60	577.71	579.57	578.68	578.42	578.04	578.89	577.89
MW2-00	589.29	18.00	7	SS	SS	2	577.51	577.77	577.45	577.36	577.59	577.65	578.67	Not Accessible	577.65	577.26	578.11	579.11
MW3-00	588.40	12.50	7	SS	SS	2	577.48	577.74	577.45	577.37	577.60	578.68	578.46	579.05	578.79	578.40	579.25	578.27
MW4-00	589.65	19.00	7	SS	SS	2	577.51	577.78	577.47	577.34	577.57	577.62	578.87	Not Accessible	577.60	577.18	578.03	577.03
MW5-00	588.89	13.00	7	SS	SS	2	576.91	576.90	577.31	577.91	578.01	n/a (4)	n/a (4)	579.12	578.86	578.66	578.36	577.63
SG-1	580.00	--	--	--	--	--	(5)	577.33	577.43	577.93	578.05	Destroyed (3)	Destroyed (3)	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation ⁽⁶⁾							576.78	577.02	577.23	577.49	577.76	578.27	577.81	577.48	577.42	577.37	577.24	577.14

Notes:

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

Table 3
Monitoring Well Completion Details And Groundwater Elevations
Racer Trust - Bay City Industrial Land
Bay City, Michigan

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL)										
							1/4/2000	11/24/1999	10/25/1999	9/27/1999	9/7/1999	7/20/1999	6/22/1999	5/20/1999	4/20/1999	3/19/1999	3/8/1999
Machine Storage Area (MSA)																	
LMW13S	589.40	19.22	10	SS	PVC	2	580.08	580.68	581.26	580.55	580.02	579.68	579.23	581.42	582.65	583.17	582.56
LMW17S	589.31	19.83	10	SS	PVC	2	579.47	579.71	579.69	578.98	579.19	579.43	579.65	579.77	580.25	581.57	581.58
LMW18S	592.33	22.52	10	SS	PVC	2	577.37	577.32	577.62	577.51	577.89	579.57	579.45	579.39	579.78	579.44	579.44
LMW19S	588.61	19.32	10	SS	PVC	2	580.30	579.58	579.95	579.53	580.01	580.42	580.52	580.51	580.94	580.90	580.66
MW1S	591.08	12.95	2	SS	SS	2	579.07	579.15	579.11	578.51	578.58	--	578.64	579.29	579.49	584.35	584.12
MW100S	591.97	14.44	10	SS	SS	2	577.49	578.09	578.77	578.57	--	579.33	579.07	579.30	579.96	582.53	582.71
MW101S	593.34	19.22	10	SS	SS	2	579.61	579.65	579.81	579.04	579.18	578.83	578.71	579.19	580.44	586.50	586.44
MW102D1	594.86	30.99	10	SS	SS	2	576.80	576.38	577.47	577.64	578.29	579.69	576.82	579.27	579.34	582.38	582.32
MW102D2	594.93	36.21	10	SS	SS	2	576.67	576.24	577.33	577.50	578.15	579.68	576.78	579.34	579.39	582.03	581.93
MW102D3	594.91	46.74	10	SS	SS	2	576.71	576.26	577.35	577.55	578.20	579.66	576.80	579.25	579.35	581.92	581.84
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	576.56	576.12	577.21	577.40	578.05	579.56	576.70	579.13	579.21	581.54	581.45
MW300S	587.12	15.06	10	SS	SS	2	579.27	579.91	578.87	578.90	579.33	579.69	579.95	579.51	579.86	579.37	579.51
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	Damaged	Damaged	578.58	578.30	578.88	579.97	578.55	580.40	581.12	582.10	582.11
Perimeter Banks (PB)																	
LMW15D	588.34	32.8	10	SS	PVC	2	577.95	577.18	578.49	578.93	579.81	579.68	577.88	579.21	579.23	579.86	579.71
MW301D1	589.54	27.50	10	SS	SS	2	578.05	577.42	578.63	578.99	579.67	579.73	575.75	579.22	579.32	579.40	579.29
MW301D2	589.16	37.24	10	SS	SS	2	577.99	577.35	578.57	578.93	579.62	579.69	576.11	579.19	579.28	579.35	579.23
MW301D3	589.22	44.04	10	SS	SS	2	577.96	577.32	578.54	578.90	579.59	579.65	576.13	579.18	579.25	579.38	579.23
MW301D4	589.33	55.95	10	SS	SS	2	577.90	577.27	578.47	578.85	579.52	579.62	576.08	579.17	579.26	579.37	579.18
Support Facilities Area (SFA)																	
MSA5S	588.60	18.98			SS	2	581.42	581.70	581.77	581.74	581.84	579.38	577.24	579.71	580.83	580.33	580.54
Crotty Street Channel																	
MW1-00	588.26	12.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW2-00	589.29	18.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW3-00	588.40	12.50	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW4-00	589.65	19.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW5-00	588.89	13.00	7	SS	SS	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SG-1	580.00	--	--	--	--	--	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation ⁽⁶⁾							577.15	576.54	577.35	578.04	578.59	578.87	578.51	578.37	578.32	578.55	578.34

Notes:

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

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

Sample Location:	Effluent	Effluent	Effluent
Sample ID:	W-12610-121015-SSH-1115	W-12610-050916-SSH-1601	W-12610-061416-SSH-1603
Sample Date:	12/10/2015	5/9/2016	6/14/2016

Parameters:	Units	Industrial User Discharge Permit Limits (Daily Maximum)			
Metals					
Cadmium	µg/L	57	2.0 U	--	2.0 U
Chromium	µg/L	6812	5.0 U	--	5.0 U
Copper	µg/L	1476	20 U	--	20 U
Iron	µg/L	--	0.1 U	--	390
Lead	µg/L	632	3.0 U	--	3.0 U
Mercury	µg/L	non-detect	0.2 U	--	0.2 U
Nickel	µg/L	2548	20 U	--	20 U
Silver	µg/L	200	5.0 U	--	5.0 U
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	non-detect	0.1 U	0.19 U	0.095 U
Volatile Organic Compounds					
Vinyl chloride	µg/L	2	1.0 U	--	1.0 U
General Chemistry					
Oil and grease	mg/L	100	4.8 U	--	4.7 U
Ammonia (as N)	mg/L	30	3.4	--	2.0 U
COD	mg/L	1670	10 U	--	18
pH		--	7.75	--	7.54
BOD	mg/L	835	9.3	--	2.0 U
TSS	mg/L	1336	4.0 U	--	4.0 U
Total Phosphorus	mg/L	13.8	0.10 U	--	0.10 U

Notes:

J Estimated concentration.

U Not present at or above the associated value.

1.0 Exceedance of criteria

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

AOI:	Treatment System	Crotty Street Channel	Machine Storage Area
Sample Location:	Influent	CSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge
Sample ID:	W-12610-050916-SSH-1602	W-12610-082516-SSH-1606	W-12610-082516-SSH-1607
Sample Date:	5/9/2016	8/25/2016	8/25/2016

Parameters:	Units	Michigan Residential Drinking water criteria			
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/L	0.5	0.19 U	0.19 U	1.9 U
Aroclor-1221 (PCB-1221)	µg/L	0.5	0.19 U	0.19 U	1.9 U
Aroclor-1232 (PCB-1232)	µg/L	0.5	0.19 U	0.19 U	1.9 U
Aroclor-1242 (PCB-1242)	µg/L	0.5	0.19	0.19 U	1.9 U
Aroclor-1248 (PCB-1248)	µg/L	0.5	0.19 U	0.19 U	1.9 U
Aroclor-1254 (PCB-1254)	µg/L	0.5	0.19 U	R	1.9 U
Aroclor-1260 (PCB-1260)	µg/L	0.5	0.19 U	R	1.9 U

Notes:

- J Estimated concentration
- U Not present at or above the associated value
- 0.85 Exceedance of criteria
- R Rejected

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	Machine Storage Area	Perimeter Banks	Perimeter Banks	Machine Storage Area	
Sample Location:		MW102D1	MW102D1	MW102D2	MW102D4	MW300S	LMW13S	LMW15D	MW301D2	
Sample ID:		GW-12610-082716-SSH-1613	GW-12610-082716-SSH-1614	GW-12610-082616-SSH-1612	GW-12610-082616-SSH-1611	GW-12610-082616-SSH-1610	GW-12610-082616-SSH-1609	GW-12610-082616-SSH-1608	GW-12610-121416-SSH-1615	
Sample Date:		8/27/2016	8/27/2016 (Duplicate)	8/26/2016	8/26/2016	8/26/2016	8/26/2016	8/26/2016	12/14/2016	
Parameters:	Michigan Residential Units Drinking water criteria									
Polychlorinated Biphenyls										
Aroclor-1016 (PCB-1016)	µg/L	0.5	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.5	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.5	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.5	0.19 U	0.19 U	0.15 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.5	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.5	0.19 U	0.19 U	0.045 J	0.19 U	R	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.5	0.19 U	0.19 U	0.2 U	0.19 U	R	0.19 U	0.19 U	0.19 U

Notes:

- J Estimated concentration.
- U Not present at or above the associated value.
- R Rejected
- 1.0 Exceedance of criteria

Table 7

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

Plant Area	Location	Original Program (1) 2001 - 2010			Revised 2011 - 2014			Revised 2015-2017			Revised 2015-2017		
		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)
		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 Checklists

On-Site Personnel: Steve Hoevermeyer

Completed Date: 12/30/15

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather mid 30s, cloudy
 Temperature wind 21 mph

2. SITE INSPECTION

- (V/N) If yes indicate nature of maintenance/repairs required
- Exposure Barrier (signs of trespassing, impairment of pavement)
 - Multi-layer Cap (evidence of settlement, erosion, disturbance)
 - Containment System (signs of deterioration of sheet pile, leaking) > check all areas in spring

3. GROUNDWATER EXTRACTION SYSTEM

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	12.03	Y	Y	couple loops LNAPL	
EW-8	11.34	13.66	Y	Y		
EW-12	9.42	7.99	Y	Y		
EW-15	6.71	vault minor flooding		Y	LNAPL on probe	
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	9.36	8.55	8.44	13.54/14.95	7.59	7.61

4. GROUNDWATER TREATMENT SYSTEM

- | | Comments |
|---|---------------------|
| <input checked="" type="checkbox"/> Check piping for leaks | none observed |
| <input checked="" type="checkbox"/> Check Bag filters | high pressure |
| <input checked="" type="checkbox"/> check GACs for leaks | none |
| <input checked="" type="checkbox"/> Check PLC | OK |
| <input checked="" type="checkbox"/> check aerator | OK |
| <input checked="" type="checkbox"/> check sludge pump | OK |
| <input checked="" type="checkbox"/> check inspection drum | Fe bacteria colored |
| <input checked="" type="checkbox"/> check aeration tank | OK |
| <input checked="" type="checkbox"/> check settling chamber | Fe bacteria |
| <input checked="" type="checkbox"/> check clear well | OK |
| <input checked="" type="checkbox"/> check floats in clearwell | OK |

- | | Comments |
|---|----------------------|
| <input checked="" type="checkbox"/> check feed pump | |
| Flow Reading | <u>1.69</u> (gpm) |
| Totalized Flow Reading | <u>351,550</u> (gal) |
| <input checked="" type="checkbox"/> heater on? | <u>yes</u> |
| <input checked="" type="checkbox"/> check sludge tank | |
| sludge thickness | <u>≈ 1-2</u> (in) |

Collect Samples

- Sample Groundwater Treatment System Influent W-12610-
- Sample Groundwater Treatment System effluent W-12610-

Date Initials Sample Number Time

Notes

appears feed pump maybe getting air in the line when water drops to level of low level float

SH

On-Site Personnel: Steve Hoevemeyer

Completed Date: 1/28/16

Completed By: SH

1. **DETAILS OF INSPECTION**

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

Weather mostly cloudy, wind 21 mph
 Temperature low 30s

2. **SITE INSPECTION**

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement)
- Multi-layer Cap (evidence of settlement, erosion, disturbance) little snow + ice
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks at welds on cap

3. **GROUNDWATER EXTRACTION SYSTEM**

- Forcemain tubing requires replacement? replace tubing when 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	12.22	y - 70%	y		
EW-8	11.34	13.73	y - 75%	y		
EW-12	9.42	7.69	y - 75%	y	WVAPL at 7.62'	
EW-15	6.71	8.69	y - 55%	y		
EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.36	8.48	8.15	13.39/13.81	8.33	9.93

4. **GROUNDWATER TREATMENT SYSTEM**

	Comments		Comments
<input checked="" type="checkbox"/> Check piping for leaks	<u>none</u>	<input checked="" type="checkbox"/> check feed pump	<u>filling clearwell</u>
<input checked="" type="checkbox"/> Check Bag filters	<u>OK</u>	Flow Reading	<u>off</u> (gpm)
<input checked="" type="checkbox"/> check GACs for leaks	<u>none</u>	Totalized Flow Reading	<u>380,174</u> (gal)
<input checked="" type="checkbox"/> Check PLC	<u>OK</u>	<input checked="" type="checkbox"/> heater on?	<u>yes</u>
<input checked="" type="checkbox"/> check aerator	<u>OK</u>	<input checked="" type="checkbox"/> check sludge tank	<u>OK</u>
<input checked="" type="checkbox"/> check sludge pump	<u>OK</u>	sludge thickness	<u>~1-2</u> (in)
<input checked="" type="checkbox"/> check inspection drum	<u>Fe colored</u>		
<input checked="" type="checkbox"/> check aeration tank	<u>OK</u>		
<input checked="" type="checkbox"/> check settling chamber	<u>Fe bacteria</u>		
<input checked="" type="checkbox"/> check clear well	<u>OK</u>		
<input checked="" type="checkbox"/> check floats in clearwell	<u>adjusted</u>		

Collect Samples

- Sample Groundwater Treatment System Influent W-12610-
- Sample Groundwater Treatment System effluent W-12610-

Date Initials Sample Number Time

Notes

conducted confined space entry in clearwell to adjust low level float so fuel pump will not get air into line of GACs - 1/15/16

On-Site Personnel: Steve Hoevemeyer

Completed Date: 2/25/16

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather Wind 15-20, snow
 Temperature low 30s

2. SITE INSPECTION

- (Y/N) If yes indicate nature of maintenance/repairs required
- Exposure Barrier (signs of trespassing, impairment of pavement) no excavations
 - Multi-layer Cap (evidence of settlement, erosion, disturbance) 10-12" snow
 - Containment System (signs of deterioration of sheet pile, leaking) minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- Forcemain tubing requires replacement? Completed EWS on 2/24

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	12.12	75%	Y	drops of LNAPL	
EW-8	11.34	13.73	80%	Y		
EW-12	9.42	7.74	90%	Y	thick LNAPL	
EW-15	6.71	8.59	55%	Y		
EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	<u>10-12" of snow on top of vaults</u>					

4. GROUNDWATER TREATMENT SYSTEM

	Comments		Comments
<input checked="" type="checkbox"/> Check piping for leaks	<u>none</u>	<input checked="" type="checkbox"/> check feed pump	<u>80%</u>
<input checked="" type="checkbox"/> Check Bag filters	<u>OK</u>	Flow Reading	(gpm)
<input checked="" type="checkbox"/> check GACs for leaks	<u>none</u>	Totalized Flow Reading	<u>388,790</u> (gal)
<input checked="" type="checkbox"/> Check PLC	<u>OK</u>	<input checked="" type="checkbox"/> heater on?	<u>yes</u>
<input checked="" type="checkbox"/> check aerator	<u>installed repair unit</u>	<input checked="" type="checkbox"/> check sludge tank	
<input checked="" type="checkbox"/> check sludge pump	<u>run p-mp</u>	sludge thickness	<u>less than 1</u> (in)
<input checked="" type="checkbox"/> check inspection drum	<u>OK</u>		
<input checked="" type="checkbox"/> check aeration tank	<u>OK</u>		
<input checked="" type="checkbox"/> check settling chamber	<u>OK - some iron bacteria buildup</u>		
<input checked="" type="checkbox"/> check clear well	<u>OK</u>		
<input checked="" type="checkbox"/> check floats in clearwell	<u>OK</u>		

Collect Samples

- Sample Groundwater Treatment System Influent **W-12610-**
- Sample Groundwater Treatment System effluent **W-12610-**

Date Initials Sample Number Time

Notes

-clean aerator diffusers

On-Site Personnel: Steve Hoevermeyer

Completed Date: 3/19/16

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather mostly sun, wind = 5 mph
 Temperature high 30s

2. SITE INSPECTION

(Y/N) If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) no excavations
- Multi-layer Cap (evidence of settlement, erosion, disturbance) vegetation brown
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

- Forcemain tubing requires replacement? EW15

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	12.11	75%	on		
EW-8	11.34	9.68	80%		LNAPL on probe	
EW-12	9.42	7.11	90%		thick LNAPL	
EW-15	6.71	1.88'	55%			
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	8.69	8.44	13.52/15.11	8.17	6.88

4. GROUNDWATER TREATMENT SYSTEM

- | | Comments |
|---|------------------------|
| <input checked="" type="checkbox"/> Check piping for leaks | none |
| <input checked="" type="checkbox"/> Check Bag filters | OK |
| <input checked="" type="checkbox"/> check GACs for leaks | OK |
| <input checked="" type="checkbox"/> Check PLC | OK |
| <input checked="" type="checkbox"/> check aerator | OK |
| <input checked="" type="checkbox"/> check sludge pump | run pump |
| <input checked="" type="checkbox"/> check inspection drum | OK |
| <input checked="" type="checkbox"/> check aeration tank | OK |
| <input checked="" type="checkbox"/> check settling chamber | iron bacteria building |
| <input checked="" type="checkbox"/> check clear well | OK |
| <input checked="" type="checkbox"/> check floats in clearwell | OK |

- | | Comments |
|---|------------------|
| <input checked="" type="checkbox"/> check feed pump | |
| Flow Reading | |
| Totalized Flow Reading | 409,836 (gal) |
| <input checked="" type="checkbox"/> heater on? | yes |
| <input checked="" type="checkbox"/> check sludge tank | yes |
| sludge thickness | less than 1 (in) |

Collect Samples

- | | Date | Initials | Sample Number | Time |
|---|------|----------|---------------|------|
| <input type="checkbox"/> Sample Groundwater Treatment System Influent | | | W-12610- | |
| <input type="checkbox"/> Sample Groundwater Treatment System effluent | | | W-12610- | |

Notes

SH

On-Site Personnel: Steve Hoevermeyer

Completed Date: 2/19/16

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather part sun/clouds, 50°F
 Temperature wind 2/5 mph

2. SITE INSPECTION

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) no elevations
- Multi-layer Cap (evidence of settlement, erosion, disturbance) vegetation - brown hint of green
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

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	12.13	70%			
EW-8	11.34	11.91	75%			
EW-12	9.42	7.79	85%		ATO - thick LNAPL	
EW-15	6.71	7.67	50%			
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	9.36	8.53	8.07	13.49/15.41	6.51	4.82

4. GROUNDWATER TREATMENT SYSTEM

	Comments		Comments
<input checked="" type="checkbox"/> Check piping for leaks	<u>none</u>	<input checked="" type="checkbox"/> check feed pump	<u>80%</u>
<input checked="" type="checkbox"/> Check Bag filters	<u>OK</u>	Flow Reading	<u>1.85 (gpm)</u>
<input checked="" type="checkbox"/> check GACs for leaks	<u>none 2.0 psi</u>	Totalized Flow Reading	<u>442,283 (gal)</u>
<input checked="" type="checkbox"/> Check PLC	<u>OK</u>	<input checked="" type="checkbox"/> heater on?	<u>yes</u>
<input checked="" type="checkbox"/> check aerator	<u>OK 6 psi</u>	<input checked="" type="checkbox"/> check sludge tank	
<input checked="" type="checkbox"/> check sludge pump	<u>run</u>	sludge thickness	<u>less than 1 (in)</u>
<input checked="" type="checkbox"/> check inspection drum	<u>OK</u>		
<input checked="" type="checkbox"/> check aeration tank	<u>OK</u>		
<input checked="" type="checkbox"/> check settling chamber	<u>iron bacteria</u>		
<input checked="" type="checkbox"/> check clear well	<u>OK</u>		
<input checked="" type="checkbox"/> check floats in clearwell	<u>OK</u>		

Collect Samples

	Date	Initials	Sample Number	Time
<input type="checkbox"/> Sample Groundwater Treatment System Influent			<u>W-12610-</u>	
<input type="checkbox"/> Sample Groundwater Treatment System effluent			<u>W-12610-</u>	

Notes

storage bldgs - OK - gate

sump pump in EW14 popping GFI

ASH

On-Site Personnel: Steve Hoevermeyer

Completed Date: 5/24/16

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather sun wind ~ 5-10 mph
 Temperature high 70s

2. SITE INSPECTION

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) no excavations
- Multi-layer Cap (evidence of settlement, erosion, disturbance) vegetation - green + good
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

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	11.88	70%	N		
EW-8	11.34		75%	N		
EW-12	9.42		85%	N		
EW-15	6.71	5.13	50%	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	9.18	8.29	7.71		4.69	3.03

4. GROUNDWATER TREATMENT SYSTEM

- | | Comments |
|---|---------------------------|
| <input checked="" type="checkbox"/> Check piping for leaks | <u>none</u> |
| <input checked="" type="checkbox"/> Check Bag filters | <u>OK - 15.0 psi</u> |
| <input checked="" type="checkbox"/> check GACs for leaks | <u>none</u> |
| <input checked="" type="checkbox"/> Check PLC | <u>OK</u> |
| <input checked="" type="checkbox"/> check aerator | <u>OK - 6 psi</u> |
| <input checked="" type="checkbox"/> check sludge pump | <u>run</u> |
| <input checked="" type="checkbox"/> check inspection drum | <u>OK - iron bacteria</u> |
| <input checked="" type="checkbox"/> check aeration tank | <u>OK</u> |
| <input checked="" type="checkbox"/> check settling chamber | <u>OK - iron bacteria</u> |
| <input checked="" type="checkbox"/> check clear well | <u>OK</u> |
| <input checked="" type="checkbox"/> check floats in clearwell | <u>OK</u> |

- | | Comments |
|---|-------------------------|
| <input checked="" type="checkbox"/> check feed pump | <u>80%</u> |
| Flow Reading | <u>1.80 (gpm)</u> |
| Totalized Flow Reading | <u>520,670 (gal)</u> |
| <input checked="" type="checkbox"/> heater on? | <u>no</u> |
| <input checked="" type="checkbox"/> check sludge tank | |
| sludge thickness | <u>less than 2 (in)</u> |

Collect Samples

	Date	Initials	Sample Number	Time
<input type="checkbox"/> Sample Groundwater Treatment System Influent			<u>W-12610-</u>	
<input checked="" type="checkbox"/> Sample Groundwater Treatment System effluent			<u>W-12610-050916-SSH-1601</u>	<u>0830</u>

Notes

- no interface probe - did not measure EWS with potential LMAPL
- storage blvs - OK
- backwash GACs; change bags

On-Site Personnel: Steve Hoevemeyer

Completed Date: 6/29/14

Completed By: SH

1. DETAILS OF INSPECTION

- Routine Monthly Inspection
 - Response to Alarm (list type and/or PLC outputs) high GAC pressure
 - Other task: O+M
- Weather SUN, wind 35-10 mph
 Temperature 70°

2. SITE INSPECTION

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

3. GROUNDWATER EXTRACTION SYSTEM

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	13.05	75%	N	drops of LNAPL	
EW-8	11.34	9.49	90%	N		
EW-12	9.42	7.76	90%	N	thick LNAPL	
EW-15	6.71	4.89	55%	N		
EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.43	8.28	7.71	13.62/15.45	4.41	2.73

4. GROUNDWATER TREATMENT SYSTEM

	Comments		Comments
<input checked="" type="checkbox"/> Check piping for leaks	<u>none</u>	<input checked="" type="checkbox"/> check feed pump	<u>80%</u>
<input checked="" type="checkbox"/> Check Bag filters	<u>OK - 9 psi</u>	Flow Reading	<u>1.70 (gpm)</u>
<input checked="" type="checkbox"/> check GACs for leaks	<u>none</u>	Totalized Flow Reading	<u>556,457 (gal)</u>
<input checked="" type="checkbox"/> Check PLC	<u>OK</u>	<input checked="" type="checkbox"/> heater on?	<u>no</u>
<input checked="" type="checkbox"/> check aerator	<u>OK - 6 psi</u>	<input checked="" type="checkbox"/> check sludge tank	
<input checked="" type="checkbox"/> check sludge pump	<u>run</u>	sludge thickness	<u>less than 2 (in)</u>
<input checked="" type="checkbox"/> check inspection drum	<u>iron bacteria</u>		
<input checked="" type="checkbox"/> check aeration tank	<u>OK</u>		
<input checked="" type="checkbox"/> check settling chamber	<u>OK - iron bacteria</u>		
<input checked="" type="checkbox"/> check clear well	<u>OK</u>		
<input checked="" type="checkbox"/> check floats in clearwell	<u>OK - hang up</u>		

Collect Samples

	Date	Initials	Sample Number	Time
<input type="checkbox"/> Sample Groundwater Treatment System Influent			<u>W-12610-061416-SSH-1603</u>	
<input type="checkbox"/> Sample Groundwater Treatment System effluent			<u>W-12610-</u>	

Notes

- met DEQ onsite
- continue to get alarms from treatment system

SSH

On-Site Personnel: Steve Hoevermeyer

Completed Date: 7/20/16

Completed By: SH

1. **DETAILS OF INSPECTION**

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

Weather Sun, wind ~10 mph
 Temperature 80's

2. **SITE INSPECTION**

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) no excavations
- Multi-layer Cap (evidence of settlement, erosion, disturbance) vegetation good
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks on cap; minor erosion

3. **GROUNDWATER EXTRACTION SYSTEM**

Forcemain tubing requires replacement? 7/18 - replaced EW15

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	11.81	70%	N		
EW-8	11.34	13.97	80%	N		
EW-12	9.42	8.39	90%	N	thick LNAPL	
EW-15	6.71	3.13	55%	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	9.44	8.29	7.71	13.71/14.84	4.24	2.52

4. **GROUNDWATER TREATMENT SYSTEM**

Comments	Comments
<input checked="" type="checkbox"/> Check piping for leaks <u>none</u>	<input checked="" type="checkbox"/> check feed pump <u>80%</u>
<input checked="" type="checkbox"/> Check Bag filters <u>OK - 5 psi</u>	Flow Reading <u>1.68 (gpm)</u>
<input checked="" type="checkbox"/> check GACs for leaks <u>NONE</u>	Totalized Flow Reading <u>561,893 (gal)</u>
<input checked="" type="checkbox"/> Check PLC <u>OK</u>	<input checked="" type="checkbox"/> heater on? <u>no</u>
<input checked="" type="checkbox"/> check aerator <u>OK - 6 psi</u>	<input checked="" type="checkbox"/> check sludge tank <u>filling up w/ H₂O</u>
<input checked="" type="checkbox"/> check sludge pump <u>run</u>	sludge thickness <u>less than 2 (in)</u>
<input checked="" type="checkbox"/> check inspection drum <u>OK - water reddish</u>	
<input checked="" type="checkbox"/> check aeration tank <u>OK</u>	
<input checked="" type="checkbox"/> check settling chamber <u>OK iron bacteria</u>	
<input checked="" type="checkbox"/> check clear well	
<input checked="" type="checkbox"/> check floats in clearwell <u>stick once in a while</u>	

Collect Samples

	Date	Initials	Sample Number	Time
<input type="checkbox"/> Sample Groundwater Treatment System Influent			W-12610-	
<input type="checkbox"/> Sample Groundwater Treatment System effluent			W-12610-	

Notes

- continue to get alarms - high GACs or high feed tank
 - storage bl'ds - OK
 - fence has minor damage from tree branches
 - 7/18 - change out bag filters
- ASH

On-Site Personnel: Steve Hoevermeyer

Completed Date: 8/31/16

Completed By: SH

1. **DETAILS OF INSPECTION**

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

Weather cloudy, wind = 5 mph
 Temperature high 70s

2. **SITE INSPECTION**

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) no excavations
- Multi-layer Cap (evidence of settlement, erosion, disturbance) minor erosion by sheet pile; vegetation ok
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks on cap at wells

3. **GROUNDWATER EXTRACTION SYSTEM**

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	14.84	70%	N	drops of LNAPL	
EW-8	11.34	12.09	80%	N	drops of LNAPL	
EW-12	9.42	8.26	90%	N	thick LNAPL	
EW-15	6.71	5.79	50%	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	9.36	8.11	7.62	13.63/14.82	8.22	7.21 (slump)

4. **GROUNDWATER TREATMENT SYSTEM**

Check	Comments	Check	Comments
<input checked="" type="checkbox"/> Check piping for leaks	none	<input checked="" type="checkbox"/> check feed pump	90%
<input checked="" type="checkbox"/> Check Bag filters	OK - changed 8/22	Flow Reading	0.81 (gpm)
<input checked="" type="checkbox"/> check GACs for leaks	none	Totalized Flow Reading	607,228 (gal)
<input checked="" type="checkbox"/> Check PLC	OK	<input checked="" type="checkbox"/> heater on?	no
<input checked="" type="checkbox"/> check aerator	OK - 6 psi	<input checked="" type="checkbox"/> check sludge tank	almost full of H ₂ O
<input checked="" type="checkbox"/> check sludge pump	run	sludge thickness	less than 2 (in)
<input checked="" type="checkbox"/> check inspection drum	OK - reddish water		
<input checked="" type="checkbox"/> check aeration tank	OK		
<input checked="" type="checkbox"/> check settling chamber	iron bacteria		
<input checked="" type="checkbox"/> check clear well	OK		
<input checked="" type="checkbox"/> check floats in clearwell	stick once in a while		

Collect Samples

	Date	Initials	Sample Number	Time
<input type="checkbox"/> Sample Groundwater Treatment System Influent			W-12610-	
<input type="checkbox"/> Sample Groundwater Treatment System effluent			W-12610-	

Notes

- annual sampling on 8/26 + 27
 - collect MSA + CSC samples on 8/25

On-Site Personnel: Steve Hoevermeyer

Completed Date: 9/30/16

Completed By: SH

1. DETAILS OF INSPECTION

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

Weather light rain, low 60s
 Temperature wind 10-15 mph

2. SITE INSPECTION

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) no excavations
- Multi-layer Cap (evidence of settlement, erosion, disturbance) vegetation OK - minor erosion
- Containment System (signs of deterioration of sheet pile, leaking) welds on cap are slightly cracked

3. GROUNDWATER EXTRACTION SYSTEM

Forcemain tubing requires replacement? changed EW15 on 9/26

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	14.88	70%	N		
EW-8	11.34	11.39	80%	N	drops of LNAPL	
EW-12	9.42	8.35	90%	N	thick LNAPL	
EW-15	6.71	6.26	50%	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	9.41	8.33	7.83	13.70/14.66	8.59	11.85

4. GROUNDWATER TREATMENT SYSTEM

- Check piping for leaks none
- Check Bag filters OK - 6.5 psi
- check GACs for leaks none - 6.25 psi
- Check PLC OK
- check aerator OK - 3/4 psi
- check sludge pump run
- check inspection drum OK - reddish H₂O
- check aeration tank OK
- check settling chamber iron bacteria
- check clear well OK
- check floats in clearwell stick once in

- check feed pump 85%
- Flow Reading 1.69 (gpm)
- Totalized Flow Reading 607,717 (gal)
- heater on? no
- check sludge tank sludge thickness full of H₂O less than 2 (in)

Collect Samples

- Sample Groundwater Treatment System Influent W-12610-
- Sample Groundwater Treatment System effluent W-12610-

Notes

- vegetation scheduled for mowing
- EW14 sump pump has been running
- storage bldg, gate, fence - OK

SH

On-Site Personnel: Steve Hoevemeyer
SH

Completed Date: 10/28/16
 Completed By: SH

1. DETAILS OF INSPECTION

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

Weather cloudy, wind ~ 5mph
 Temperature low 40s

2. SITE INSPECTION

If yes indicate nature of maintenance/repairs required

- Exposure Barrier (signs of trespassing, impairment of pavement) electrical work being done by Consumers
- Multi-layer Cap (evidence of settlement, erosion, disturbance) no excavations
- Containment System (signs of deterioration of sheet pile, leaking) minor cracks at welds on cap

3. GROUNDWATER EXTRACTION SYSTEM

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	15.05	Y - 70%	N	LMAPL on probe	
EW-8	11.34	12.33	Y - 80%	N	LMAPL on probe	
EW-12	9.42	8.13	Y - 90%	N	LMAPL on probe	
EW-15	6.71	3.96	Y - 50%	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	9.44	8.28	8.01	13.75	8.08	6.49

4. GROUNDWATER TREATMENT SYSTEM

Check	Comments	Check	Comments
<input checked="" type="checkbox"/> Check piping for leaks	none	<input checked="" type="checkbox"/> check feed pump	85%
<input checked="" type="checkbox"/> Check Bag filters		Flow Reading	0.0 (gpm)
<input checked="" type="checkbox"/> check GACs for leaks	none	Totalized Flow Reading	608,865 (gal)
<input checked="" type="checkbox"/> Check PLC		<input checked="" type="checkbox"/> heater on?	no
<input checked="" type="checkbox"/> check aerator	OK	<input checked="" type="checkbox"/> check sludge tank	OK
<input checked="" type="checkbox"/> check sludge pump	OK	sludge thickness	2" (in)
<input checked="" type="checkbox"/> check inspection drum	iron bacteria		
<input checked="" type="checkbox"/> check aeration tank			
<input checked="" type="checkbox"/> check settling chamber	iron bacteria		
<input checked="" type="checkbox"/> check clear well			"filling"
<input checked="" type="checkbox"/> check floats in clearwell	OK		

Collect Samples

- Sample Groundwater Treatment System Influent **W-12610-**
- Sample Groundwater Treatment System effluent **W-12610-**

Date Initials Sample Number Time

Notes

gross moved in Oct.
EW15 requires new tubing - on order

BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 11/11/16

Completed By: SH SEA

1. DETAILS OF INSPECTION

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

Weather sun, wind ~ 20mph
 Temperature low 40s

2. SITE INSPECTION

- (V/N) If yes indicate nature of maintenance/repairs required*
- Exposure Barrier (signs of trespassing, impairment of pavement) vegetation growing in gravel runways
 - Multi-layer Cap (evidence of settlement, erosion, disturbance) no excavations; vegetation good
 - Containment System (signs of deterioration of sheet pile, leaking) minor cracks at wells on cap

3. GROUNDWATER EXTRACTION SYSTEM

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	15.03	Y - 70%	N	LNAPL drops on probe	
EW-8	11.34	13.05	Y - 80%	N	LNAPL drops on probe	
EW-12	9.42	8.27	Y - 90%	N	LNAPL	
EW-15	6.71	4.58	Y - 50%	N	requires tubing - ordered	
EW (no pump)	EW-7	EW-9	EW-10	EW-11	EW-13	EW-14
Target Depth	11.00	11.04	10.77	14.51	7.33	5.42
DTW	9.43	8.29	8.17	—	7.77	11.85

4. GROUNDWATER TREATMENT SYSTEM

Check	Comments	Check	Comments
<input checked="" type="checkbox"/> Check piping for leaks	none	<input checked="" type="checkbox"/> check feed pump	85%
<input checked="" type="checkbox"/> Check Bag filters	change in Dec	Flow Reading	(gpm)
<input checked="" type="checkbox"/> check GACs for leaks	none	Totalized Flow Reading	608,980 (gal)
<input checked="" type="checkbox"/> Check PLC	OK	<input checked="" type="checkbox"/> heater on?	no
<input checked="" type="checkbox"/> check aerator	OK	<input checked="" type="checkbox"/> check sludge tank	full of H ₂ O
<input checked="" type="checkbox"/> check sludge pump	operational	sludge thickness	~ 2" (in)
<input checked="" type="checkbox"/> check inspection drum	iron bacteria		
<input checked="" type="checkbox"/> check aeration tank	—		
<input checked="" type="checkbox"/> check settling chamber	—		
<input checked="" type="checkbox"/> check clear well	filling upon inspect		
<input checked="" type="checkbox"/> check floats in clearwell	OK		

Collect Samples

- Sample Groundwater Treatment System Influent **W-12610-**
- Sample Groundwater Treatment System effluent **W-12610-**

Notes

EW15 continue pumping problems - needs tubing which has been ordered

Attachment B
Analytical Results Summary (2006 to 2016)

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

Parameters:	Units	Drinking water criteria	Crotty Street Channel CB-2 W-040506-SSH-CB04 4/5/2006	Crotty Street Channel CB-2 W-031307-SSH-CB07-4 3/13/2007	Crotty Street Channel CB-2 CB2_8/27/07 8/27/2007	Crotty Street Channel CB-2 CB2-(06/11/08) 6/11/2008	Crotty Street Channel CB-2 CB2_(08/19/08) 8/19/2008	Crotty Street Channel CB-2 CB-2_(03/12/09) 3/12/2009	Crotty Street Channel CB-2 W-12610-032410-SSH-CB10-1 3/24/2010	Crotty Street Channel CB-2 W-12610-040611-SSH-11103 4/6/2011
Metals										
Antimony	mg/L	0.006	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.01	-	-	-	-	-	-	-	-
Barium	mg/L	2	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.004	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.005	-	-	-	-	-	-	-	-
Chromium	mg/L	0.1	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.04	-	-	-	-	-	-	-	-
Copper	mg/L	1	-	-	-	-	-	-	-	-
Iron	mg/L	300000	-	-	-	-	-	-	-	-
Lead	mg/L	0.004	-	-	-	-	-	-	-	-
Mercury	mg/L	0.002	-	-	-	-	-	-	-	-
Nickel	mg/L	0.1	-	-	-	-	-	-	-	-
Selenium	mg/L	0.05	-	-	-	-	-	-	-	-
Silver	mg/L	0.034	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.0045	-	-	-	-	-	-	-	-
Zinc	mg/L	2.4	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls										
Aroclor-1016 (PCB-1016)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds										
cis-1,2-Dichloroethene	µg/L	70	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	74	-	-	-	-	-	-	-	-
Toluene	µg/L	790	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	100	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	2	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	280	-	-	-	-	-	-	-	-
General Chemistry										
Oil and grease	mg/L	-	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	10000000	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-	-
pH	mg/L	6.5 to 8.5	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	63000000	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- - Not analyzed.

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

	Crotty Street Channel CB-2 W-12610-040611-SSH-11104 4/6/2011	Crotty Street Channel CB-2 W-12610-102511-SSH-027 10/25/2011	Crotty Street Channel CB-2 W-12610-041712-SSH-SA1202 4/17/2012	Crotty Street Channel CB-2 GW-12610-080712-SSH-001 8/7/2012	Crotty Street Channel CB-2 W-12610-040913-SSH-CB1213 4/9/2013	Crotty Street Channel CSA GW Ext. Sys. Discharge W-040506-SSH-C03 4/5/2006	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-081606-SSH-0601 8/16/2006	Crotty Street Channel CSA GW Ext. Sys. Discharge W-031307-SSH-C07-3 3/13/2007
Parameters:	Units	(Duplicate)						
Metals								
Antimony	mg/L	-	0.0002 J	-	-	-	-	-
Arsenic	mg/L	-	0.005 U	-	-	-	-	-
Barium	mg/L	-	0.022 JB	-	-	-	-	-
Beryllium	mg/L	-	0.001 U	-	-	-	-	-
Cadmium	mg/L	-	0.001 U	-	-	-	-	-
Chromium	mg/L	-	0.01 U	-	-	-	-	-
Cobalt	mg/L	-	0.00012 J	-	-	-	-	-
Copper	mg/L	-	0.0025 JB	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	0.003 U	-	-	-	-	-
Mercury	mg/L	-	0.0002 U D 0.00000084	-	-	-	-	-
Nickel	mg/L	-	0.00043 JB	-	-	-	-	-
Selenium	mg/L	-	0.0025 J	-	-	-	-	-
Silver	mg/L	-	0.0002 U	-	-	-	-	-
Thallium	mg/L	-	0.00024 J	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	0.00046 J	-	-	-	-	-
Zinc	mg/L	-	0.0025 JB	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U	0.20 UJ
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U	0.20 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U	0.20 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.36	0.23 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U	0.20 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U	0.20 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U	0.20 UJ
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	1.0 U	-	-	-	-	-
Ethylbenzene	µg/L	-	1.0 U	-	-	-	-	-
Toluene	µg/L	-	1.0 U	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	1.0 U	-	-	-	-	-
Vinyl chloride	µg/L	-	1.0 U	-	-	-	-	-
Xylenes (total)	µg/L	-	2.0 U	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

- - Not analyzed.

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

Parameters:	Units	Crotty Street Channel CSA GW Ext. Sys. Discharge CSC 8/23/2007	Crotty Street Channel CSA GW Ext. Sys. Discharge CSC-(06/11/08) 6/11/2008	Crotty Street Channel CSA GW Ext. Sys. Discharge DUP-(06/11/08) 6/11/2008 (Duplicate)	Crotty Street Channel CSA GW Ext. Sys. Discharge CSC_(08/19/08) 8/19/2008	Crotty Street Channel CSA GW Ext. Sys. Discharge CSC_(03/12/09) 3/12/2009	Crotty Street Channel CSA GW Ext. Sys. Discharge CSC 8/27/2009	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-043010-SSH-CSC-4 4/30/2010
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.51	0.074 J	0.077 J	0.38	0.14 J	0.75	0.59 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-081910-SSH-026 8/19/2010	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-081910-SSH-027 8/19/2010	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-040611-SSH-11102 4/6/2011	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-082211-JY-002 8/22/2011	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-041712-SSH-SA1201 4/17/2012	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-080712-SSH-002 8/7/2012	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-040913-SSH-CS1013 4/9/2013
Parameters:	Units	(Duplicate)						
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.097 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.097 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.097 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.62	0.63	0.20 U	0.96	0.62	0.86	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.097 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.097 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.044 J	0.097 U	0.20 U	0.19 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-040913-SSH-CS1113 4/9/2013	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-080713-JY-003 8/7/2013	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-080514-SSH-1402 8/5/2014	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-122914-SSH-1420 12/29/2014	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-040915-SSH-1502 4/09/15	Crotty Street Channel CSA GW Ext. Sys. Discharge GW-12610-082515-SSH-0115 8/25/15	Crotty Street Channel CSA GW Ext. Sys. Discharge W-12610-082516-SSH-1606 8/25/2016
Parameters:	Units	(Duplicate)						
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.20 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	0.20 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	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.55	0.68J	0.22	0.19 U	0.56	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.059 J	0.19 U	0.19 U	0.20 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	0.20 U	0.19 U	0.19 U	R
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	R
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

Parameters:	Units	Crotty Street Channel	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
		EW14 GW-12610-071811-SH-004 7/18/2011	EW6 GW-12610-072011-SH-016 7/20/2011	EW7 GW-12610-071811-SH-001(C) 7/18/2011	EW8 GW-12610-071911-SH-009C 7/19/2011	EW9 GW-12610-071811-SH-002(C) 7/18/2011	EW9 GW-12610-071811-SH-003 7/18/2011	EW10 GW-12610-072011-SH-017 7/20/2011
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	0.00000036 J	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	µg/L	0.54	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	-	-	-	-	-	-
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	200	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	0.33 J	1.0 U	3.0 J	0.54 J	0.54 J	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	18	1.7	1.8	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	2.9 J	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	140	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	2.0 U	2.0 U	0.99 J	16	3.4	3.4	2.0 U
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Machine Storage Area EW11 GW-12610-071911-SH-008C 7/19/2011	Machine Storage Area EW12 GW-12610-072011-SH-015 7/20/2011	Machine Storage Area MSA GW Ext. Sys. Discharge W-040506-SSH-M02 4/5/2006	Machine Storage Area MSA GW Ext. Sys. Discharge GW-081606-SSH-0602 8/16/2006	Machine Storage Area MSA GW Ext. Sys. Discharge W-031307-SSH-M07-2 3/13/2007	Machine Storage Area MSA GW Ext. Sys. Discharge MSA 8/23/2007	Machine Storage Area MSA GW Ext. Sys. Discharge MSA-(06/11/08) 6/11/2008
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	-	-	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	-	-	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	-	-	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	-	-	0.20 U	0.62	1.0 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	-	-	0.20	0.20 U	1.0 U	0.30	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	-	-	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	-	-	0.18 J	0.24	1.0 U	0.26	0.20 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	630	49	-	-	-	-	-
Ethylbenzene	µg/L	29 U	1.4 J	-	-	-	-	-
Toluene	µg/L	33	3.5	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	29 U	1.1 J	-	-	-	-	-
Vinyl chloride	µg/L	98	86	-	-	-	-	-
Xylenes (total)	µg/L	57 U	14	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

Parameters:	Units	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
		MSA GW Ext. Sys. Discharge MSA_(08/19/08) 8/19/2008	MSA GW Ext. Sys. Discharge DUP_(03/12/09) 3/12/2009	MSA GW Ext. Sys. Discharge MSA_(03/12/09) 3/12/2009	MSA GW Ext. Sys. Discharge MSA 8/27/2009	MSA GW Ext. Sys. Discharge W-12610-032410-SSH-MSA10-2 3/24/2010	MSA GW Ext. Sys. Discharge MSA GW-12610-081910-SSH-028 8/19/2010	MSA GW Ext. Sys. Discharge W-12610-040611-SSH-11101 4/6/2011	MSA GW Ext. Sys. Discharge MSA GW-12610-082211-JY-001 8/22/2011
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.25	0.20 U	2.1	1.3	0.20 U	0.20 U	0.13 J	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.28	0.20 U	0.20	0.20 U	0.20 U	0.17 J	0.20 U	0.19 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:
 J - Estimated concentration.
 U - Not present at or above the associated value.
 UJ - Estimated reporting limit.
 R - Rejected.
 - - Not analyzed.

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

	Machine Storage Area MSA GW Ext. Sys. Discharge W-12610-041712-SSH-SA1203 4/17/2012	Machine Storage Area MSA GW Ext. Sys. Discharge GW-12610-080712-SSH-003 8/7/2012	Machine Storage Area MSA GW Ext. Sys. Discharge W-12610-040913-SSH-MSA1313 4/9/2013	Machine Storage Area MSA GW Ext. Sys. Discharge W-12610-120913-SSH-010 12/09/13	Machine Storage Area MSA GW Ext. Sys. Discharge GW-12610-080514-SSH-1401 8/5/2014	Machine Storage Area MSA GW Ext. Sys. Discharge W-12610-122914-SSH-1422 12/29/2014	Machine Storage Area MSA GW Ext. Sys. Discharge GW-12610-082515-SSH-0215 8/25/15	Machine Storage Area MSA GW Ext. Sys. Discharge W-12610-082516-SSH-1607 8/25/2016
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.096 U	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.38 U
Aroclor-1221 (PCB-1221)	µg/L	0.096 U	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.38 U
Aroclor-1232 (PCB-1232)	µg/L	0.096 U	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.38 U
Aroclor-1242 (PCB-1242)	µg/L	0.096 U	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.38 U
Aroclor-1248 (PCB-1248)	µg/L	0.40	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.38 U
Aroclor-1254 (PCB-1254)	µg/L	0.096 U	0.19 U	1.9 U	0.20 U	R	0.19 U	0.38 U
Aroclor-1260 (PCB-1260)	µg/L	0.18	0.19 U	8.6	0.20 U	R	0.19 U	0.19 J
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

- - Not analyzed.

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

		Machine Storage Area MW102D1 GW-081606-SSH-0604 8/16/2006	Machine Storage Area MW102D1 MW102D1 8/21/2007	Machine Storage Area MW102D1 MW102D1_(08/19/08) 8/19/2008	Machine Storage Area MW102D1 MW102D1 8/26/2009	Machine Storage Area MW102D1 GW-12610-081710-JY-001 8/17/2010	Machine Storage Area MW102D1 GW-12610-082311-JY-010 8/23/2011	Machine Storage Area MW102D1 GW-12610-080912-SSH-012 8/9/2012	Machine Storage Area MW102D1 GW-12610-080713-JY-004 8/7/2013
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 J	0.44	0.20 U	0.40 J	0.31	0.28	0.43	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	R
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.046 J	0.19 U	R
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Machine Storage Area MW102D1 GW-12610-080614-SSH-1403 8/6/2014	Machine Storage Area MW102D1 GW-12610-082615-SSH-0715 8/26/2015	Machine Storage Area MW102D1 GW-12610-082615-SSH-0815 8/26/2015	Machine Storage Area MW102D1 GW-12610-082716-SSH-1613 8/27/2016	Machine Storage Area MW102D1 GW-12610-082716-SSH-1614 8/27/2016	Machine Storage Area MW102D2 GW-081606-SSH-0606 8/16/2006	Machine Storage Area MW102D2 MW102D2 8/21/2007	Machine Storage Area MW102D2 MW102D2_(08/19/08) 8/19/2008
Parameters:	Units			(Duplicate)		(Duplicate)			
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.41 J	0.34	0.34	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Machine Storage Area MW102D2 MW102D2 8/26/2009	Machine Storage Area MW102D2 GW-12610-081710-JY-002 8/17/2010	Machine Storage Area MW102D2 GW-12610-082311-JY-011 8/23/2011	Machine Storage Area MW102D2 GW-12610-080912-SSH-011 8/9/2012	Machine Storage Area MW102D2 GW-12610-080713-JY-005 8/7/2013	Machine Storage Area MW102D2 GW-12610-080614-SSH-1404 8/6/2014	Machine Storage Area MW102D2 GW-12610-082615-SSH-0915 8/26/2015	Machine Storage Area MW102D2 GW-12610-082616-SSH-1612 8/26/2016
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Aroclor-1242 (PCB-1242)	µg/L	0.073 J	0.13 J	0.20 U	0.19 U	0.19 U	0.13 J	0.19 U	0.15 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.13 J	0.19 U	0.19 U	0.19 U	0.2 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.045 J
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Machine Storage Area MW102D3 GW-081606-SSH-0607 8/16/2006	Machine Storage Area MW102D3 MW102D3 8/21/2007	Machine Storage Area MW102D3 MW102D3_(08/19/08) 8/19/2008	Machine Storage Area MW102D3 MW102D3 8/26/2009	Machine Storage Area MW102D3 GW-12610-081710-JY-003 8/17/2010	Machine Storage Area MW102D4 GW-081606-SSH-0605 8/16/2006	Machine Storage Area MW102D4 MW102D4 8/21/2007	Machine Storage Area MW102D4 MW102D4_(08/19/08) 8/19/2008
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

Parameters:	Units	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
		MW102D4 MW102D4 8/26/2009	MW102D4 GW-12610-081710-JY-004 8/17/2010	MW102D4 GW-12610-082311-JY-012 8/23/2011	MW102D4 GW-12610-080912-SSH-010 8/9/2012	MW102D4 GW-12610-080713-JY-006 8/7/2013	MW102D4 GW-12610-080614-SSH-1405 8/6/2014	MW102D4 GW-12610-080614-SSH-1406 8/6/2014	MW102D4 GW-12610-082615-SSH-1015 8/26/2015
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.084 J	0.082 J	0.19 U	0.19	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

Parameters:	Units	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
		MW102D4 GW-12610-082616-SSH-1611 8/26/2016	MW300S GW-081706-SSH-0608 8/17/2006	MW300S GW-081706-SSH-0609 8/17/2006	MW300S MW300S 8/21/2007	MW300S MW300S_(08/19/08) 8/19/2008	MW300S DUP 4 8/26/2009	MW300S MW300S 8/26/2009	MW300S MW300S 8/18/2010
				(Duplicate)			(Duplicate)		
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.11 J	0.095 J	0.24	0.21	0.40 J	0.39 J	0.14 J
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

		Machine Storage Area MW300S GW-12610-081810-JY-012 8/18/2010	Machine Storage Area MW300S GW-12610-082311-JY-004 8/23/2011	Machine Storage Area MW300S GW-12610-082311-JY-005 8/23/2011	Machine Storage Area MW300S GW-12610-080912-SSH-007 8/9/2012	Machine Storage Area MW300S GW-12610-080912-SSH-008 8/9/2012	Machine Storage Area MW300S GW-12610-080713-JY-001 8/7/2013	Machine Storage Area MW300S GW-12610-080713-JY-002 8/7/2013	Machine Storage Area MW300S GW-12610-080614-SSH-1407 8/6/2014
Parameters:	Units	(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)	
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.16 J	0.23	0.24	0.19 U	0.083 J	0.19 J	0.19 J	0.1 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	R	R	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	R	R	0.19 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

- - Not analyzed.

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

		Machine Storage Area MW300S GW-12610-082615-SSH-0615 8/26/2015	Machine Storage Area MW300S GW-12610-082616-SSH-1610 8/26/2016	Perimeter Banks LMW13S GW-081706-SSH-0610 8/17/2006	Perimeter Banks LMW13S LMW13S 8/21/2007	Perimeter Banks LMW13S LMW13S_(08/18/08) 8/18/2008	Perimeter Banks LMW13S GW-12610-081710-JY-009 8/17/2010	Perimeter Banks LMW13S GW-12610-082311-JY-006 8/23/2011	Perimeter Banks LMW13S GW-12610-080812-SSH-004 8/8/2012
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.095 J	0.19 U	0.20 U	1.0	0.20 U	0.20 U	0.72	0.79
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	1.2	0.20 U	1.6	1.1	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	R	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	R	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

Parameters:	Units	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
		LMW13S GW-12610-080812-SSH-005 8/8/2012	LMW13S GW-12610-080813-JY-008 8/8/2013	LMW13S GW-12610-080614-SSH-1408 8/6/2014	LMW13S GW-12610-082615-SSH-0315 8/26/2015	LMW13S GW-12610-082616-SSH-1609 8/26/2016	LMW15D GW-081706-SSH-0611 8/17/2006	LMW15D LMW15D 8/21/2007	LMW15D LMW15D 8/18/2008
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.85	0.19 UJ	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 J
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	1.0 J	1.0	0.98	0.58	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

	Perimeter Banks LMW15D MW15D 8/26/2009	Perimeter Banks LMW15D GW-12610-081710-JY-010 8/17/2010	Perimeter Banks LMW15D GW-12610-082311-JY-007 8/23/2011	Perimeter Banks LMW15D GW-12610-080812-SSH-006 8/8/2012	Perimeter Banks LMW15D GW-12610-080813-JY-009 8/8/2013	Perimeter Banks LMW15D GW-12610-080614-SSH-1409 8/6/2014	Perimeter Banks LMW15D GW-12610-082615-SSH-0415 8/26/2015	Perimeter Banks LMW15D GW-12610-082616-SSH-1608 8/26/2016	Perimeter Banks MW301D1 GW-081706-SSH-0612 8/17/2006
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.073 J	0.20 U	0.060 J	0.13 J	0.14 J	0.065 J	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:
 J - Estimated concentration.
 U - Not present at or above the associated value.
 UJ - Estimated reporting limit.
 R - Rejected.
 - - Not analyzed.

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

		Perimeter Banks MW301D1 MW301D1 8/21/2007	Perimeter Banks MW301D1 MW301D1_(08/19/08) 8/19/2008	Perimeter Banks MW301D1 MW301D1 8/26/2009	Perimeter Banks MW301D1 GW-12610-081710-JY-005 8/17/2010	Perimeter Banks MW301D2 MW-081706-SSH-0615 8/17/2006	Perimeter Banks MW301D2 MW301D2 8/21/2007	Perimeter Banks MW301D2 MW301D2_(08/19/08) 8/19/2008	Perimeter Banks MW301D2 MW301D2 8/26/2009	Perimeter Banks MW301D2 MW301D2 8/17/2010
Parameters:	Units									
Metals										
Antimony	mg/L	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls										
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.085 J	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U
Volatile Organic Compounds										
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-
General Chemistry										
Oil and grease	mg/L	-	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

	Perimeter Banks MW301D2 GW-12610-082311-JY-008 8/23/2011	Perimeter Banks MW301D2 GW-12610-080912-SSH-009 8/9/2012	Perimeter Banks MW301D2 GW-12610-080713-JY-007 8/7/2013	Perimeter Banks MW301D2 GW-12610-080614-SSH-1410 8/6/2014	Perimeter Banks MW301D2 GW-12610-082615-SSH-0515 8/26/2015	Perimeter Banks MW301D2 GW-12610-121416-SSH-1615 12/14/16	Perimeter Banks MW301D3 GW-081706-SSH-0614 8/17/2006	Perimeter Banks MW301D3 MW301D3 8/21/2007	Perimeter Banks MW301D3 MW301D3_(08/19/08) 8/19/2008	Perimeter Banks MW301D3 MW301D3 8/26/2009
Parameters:	Units									
Metals										
Antimony	mg/L	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls										
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds										
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-
General Chemistry										
Oil and grease	mg/L	-	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

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

Parameters:	Units	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
		MW301D3 GW-12610-081710-JY-007 8/17/2010	MW301D4 GW-081706-SSH-0613 8/17/2006	MW301D4 MW301D4 8/21/2007	MW301D4 DUP3_(08/19/08) 8/19/2008	MW301D4 MW301D4_(08/19/08) 8/19/2008	MW301D4 MW301D4 8/26/2009	MW301D4 GW-12610-081710-JY-008 8/17/2010	MW301D4 GW-12610-082311-JY-009 8/23/2011
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.12 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

- J - Estimated concentration.
- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.
- R - Rejected.
- Not analyzed.

Attachment C
Analytical Results and Reduced
Validation–2016 Annual Sampling Event

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: 240-64622-1

Client Project/Site: 12610, RACER Bay City

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



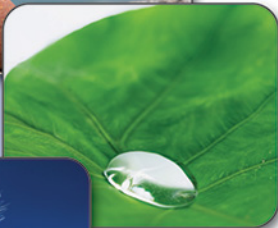
Authorized for release by:

5/16/2016 2:44:05 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



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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.

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Case Narrative

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

TestAmerica Job ID: 240-64622-1

Job ID: 240-64622-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-64622-1

Comments

No additional comments.

Receipt

The samples were received on 5/10/2016 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

GC Semi VOA

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 analytical batch 240-229964.

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

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Definitions/Glossary

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

TestAmerica Job ID: 240-64622-1

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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, RACER Bay City

TestAmerica Job ID: 240-64622-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-64622-1	W-12610-050916-SSH-1601	Water	05/09/16 08:30	05/10/16 10:05
240-64622-2	W-12610-050916-SSH-1602	Water	05/09/16 08:40	05/10/16 10:05

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Detection Summary

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

TestAmerica Job ID: 240-64622-1

Client Sample ID: W-12610-050916-SSH-1601

Lab Sample ID: 240-64622-1

No Detections.

Client Sample ID: W-12610-050916-SSH-1602

Lab Sample ID: 240-64622-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.19		0.19	0.058	ug/L	1		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

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Method Summary

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

TestAmerica Job ID: 240-64622-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	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 Sample Results

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

TestAmerica Job ID: 240-64622-1

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

Client Sample ID: W-12610-050916-SSH-1601

Lab Sample ID: 240-64622-1

Date Collected: 05/09/16 08:30

Matrix: Water

Date Received: 05/10/16 10:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/12/16 05:08	05/14/16 11:59	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		05/12/16 05:08	05/14/16 11:59	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/12/16 05:08	05/14/16 11:59	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		05/12/16 05:08	05/14/16 11:59	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		05/12/16 05:08	05/14/16 11:59	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/12/16 05:08	05/14/16 11:59	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/12/16 05:08	05/14/16 11:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	53		21 - 120	05/12/16 05:08	05/14/16 11:59	1
DCB Decachlorobiphenyl	43		10 - 120	05/12/16 05:08	05/14/16 11:59	1

Client Sample Results

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

TestAmerica Job ID: 240-64622-1

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

Client Sample ID: W-12610-050916-SSH-1602

Lab Sample ID: 240-64622-2

Date Collected: 05/09/16 08:40

Matrix: Water

Date Received: 05/10/16 10:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/12/16 05:08	05/14/16 12:18	1
Aroclor-1221	0.19	U	0.19	0.087	ug/L		05/12/16 05:08	05/14/16 12:18	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/12/16 05:08	05/14/16 12:18	1
Aroclor-1242	0.19		0.19	0.058	ug/L		05/12/16 05:08	05/14/16 12:18	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		05/12/16 05:08	05/14/16 12:18	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/12/16 05:08	05/14/16 12:18	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/12/16 05:08	05/14/16 12:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	33		21 - 120				05/12/16 05:08	05/14/16 12:18	1
DCB Decachlorobiphenyl	32		10 - 120				05/12/16 05:08	05/14/16 12:18	1

QC Association Summary

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

TestAmerica Job ID: 240-64622-1

GC Semi VOA

Prep Batch: 229964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64622-1	W-12610-050916-SSH-1601	Total/NA	Water	3520C	
240-64622-2	W-12610-050916-SSH-1602	Total/NA	Water	3520C	
LCS 240-229964/12-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-229964/11-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 230316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64622-1	W-12610-050916-SSH-1601	Total/NA	Water	8082A	229964
240-64622-2	W-12610-050916-SSH-1602	Total/NA	Water	8082A	229964
LCS 240-229964/12-A	Lab Control Sample	Total/NA	Water	8082A	229964
MB 240-229964/11-A	Method Blank	Total/NA	Water	8082A	229964

QC Sample Results

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

TestAmerica Job ID: 240-64622-1

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

Lab Sample ID: MB 240-229964/11-A
Matrix: Water
Analysis Batch: 230316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 229964

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.20	U	0.20	0.050	ug/L		05/12/16 05:08	05/14/16 12:54	1
Aroclor-1221	0.20	U	0.20	0.090	ug/L		05/12/16 05:08	05/14/16 12:54	1
Aroclor-1232	0.20	U	0.20	0.070	ug/L		05/12/16 05:08	05/14/16 12:54	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		05/12/16 05:08	05/14/16 12:54	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		05/12/16 05:08	05/14/16 12:54	1
Aroclor-1254	0.20	U	0.20	0.030	ug/L		05/12/16 05:08	05/14/16 12:54	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		05/12/16 05:08	05/14/16 12:54	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	51		21 - 120	05/12/16 05:08	05/14/16 12:54	1
DCB Decachlorobiphenyl	39		10 - 120	05/12/16 05:08	05/14/16 12:54	1

Lab Sample ID: LCS 240-229964/12-A
Matrix: Water
Analysis Batch: 230316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229964

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Aroclor-1016	2.50	1.76		ug/L		71	32 - 120
Aroclor-1260	2.50	1.33		ug/L		53	36 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	51		21 - 120
DCB Decachlorobiphenyl	43		10 - 120

Surrogate Summary

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

TestAmerica Job ID: 240-64622-1

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	TCX2	DCB2
		(21-120)	(10-120)
240-64622-1	W-12610-050916-SSH-1601	53	43
240-64622-2	W-12610-050916-SSH-1602	33	32
LCS 240-229964/12-A	Lab Control Sample	51	43
MB 240-229964/11-A	Method Blank	51	39

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

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

TestAmerica Job ID: 240-64622-1

Client Sample ID: W-12610-050916-SSH-1601

Lab Sample ID: 240-64622-1

Date Collected: 05/09/16 08:30

Matrix: Water

Date Received: 05/10/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			229964	05/12/16 05:08	CSC	TAL CAN
Total/NA	Analysis	8082A		1	230316	05/14/16 11:59	LSH	TAL CAN

Client Sample ID: W-12610-050916-SSH-1602

Lab Sample ID: 240-64622-2

Date Collected: 05/09/16 08:40

Matrix: Water

Date Received: 05/10/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			229964	05/12/16 05:08	CSC	TAL CAN
Total/NA	Analysis	8082A		1	230316	05/14/16 12:18	LSH	TAL CAN

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 240-64622-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-16 *
Illinois	NELAP	5	200004	07-31-16 *
Kansas	NELAP	7	E-10336	07-31-16 *
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (WW)	State Program	4	98016	12-31-16
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16 *
New Jersey	NELAP	2	OH001	06-30-16 *
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-16 *
Texas	NELAP	6	T104704517-15-5	08-31-16 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16
Wisconsin	State Program	5	999518190	08-31-16 *

* Certification renewal pending - certification considered valid.

TestAmerica Canton

**CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS**



240-64622 Chain of Custody

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- 10
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- 14

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: #310.229.2763 Fax:

Chain of Custody Record

133046

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

Regulatory Program: DW NPDES RCRA Other:

Client Contact
Company Name: **GHD Services**
Address: **14906 W. Sheldahl Rd Ste 200**
City/State/Zip: **PLYMOUTH MI**
Phone: **734 453 5123**
Fax:
Project Name: **Roxbury Bay City**
Site: **12610 - Tol**
P O #

Project Manager: **M. Tomka**
Tell/Fax: **519 884 0510**
Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **IE Parlys** Date: **5/16**
Lab Contact: **D Hicklin** Carrier: **FedEx**
COC No: **133076** of **1** COCs
Sampler: **S. Horvath**

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Sample Specific Notes:
W-12610-050916-SS4-1601	5/9/16 0830	G	WT	2	NM			
W-12610-050916-SS4-1602	5/9/16 0840	G	SW	2	NM			

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other
Possible Hazard Identification: **HAH**
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

Special Instructions/QC Requirements & Comments: **SA sampling**

Return to Client Disposal by Lab Archive for _____ Months

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

Custody Seal No.: **542780** Cooler Temp. (°C): Obs'd: _____ Cor'd: _____ Therm ID No.: _____

Relinquished by: **ATE A. Noy** Company: **GHD** Date/Time: **5/9/16 1600**
Received by: **[Signature]** Company: **TTA** Date/Time: **5-10-16 1005**

Relinquished by: _____ Company: _____ Date/Time: _____
Received by: _____ Company: _____ Date/Time: _____



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 64622

Client GHD Site Name _____ Cooler unpacked by: _____
 Cooler Received on 5-10-16 Opened on 5-10-16

FedEx: 1st Grd Exp UPS FAS Stetson 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# 48 (CF -1.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN# 18 (CF -0.5 °C) Observed Cooler Temp. 3.2 °C Corrected Cooler Temp. 2-7 °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 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 sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC559158
 13. Were VOAs on the COC? Yes No
 14. Were air bubbles >6 mm in any VOA vials? 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

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): _____

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: 240-66028-1

Client Project/Site: 12610-T03, RACER Bay City

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

6/23/2016 7:13:30 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.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.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Job ID: 240-66028-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-66028-1

Comments

No additional comments.

Receipt

The samples were received on 6/15/2016 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° 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: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: W-12610-061416-SSH-1603 (240-66028-1). 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

Method(s) SM 5210B: The USB dilution water D.O. depletion was greater than 0.2 mg/L. The associated sample results in batch 234644 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

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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
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.
s	Seeded Control Blank (SCB) Recovery High

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-66028-1	W-12610-061416-SSH-1603	Water	06/14/16 09:30	06/15/16 09:10
240-66028-2	TB-12610-061416-SSH-1604	Water	06/14/16 09:35	06/15/16 09:10

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- 2
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- 10
- 11
- 12
- 13
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Detection Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Client Sample ID: W-12610-061416-SSH-1603

Lab Sample ID: 240-66028-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Iron	390		100	ug/L	1		200.7 Rev 4.4	Total
Chemical Oxygen Demand	18		10	mg/L	1		410.4	Recoverable Total/NA
pH	7.54	HF	0.100	SU	1		4500 H+ B-2000	Total/NA

Client Sample ID: TB-12610-061416-SSH-1604

Lab Sample ID: 240-66028-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton



Method Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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
350.2	Nitrogen, Ammonia, Distillation	MCAWW	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
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 Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Client Sample ID: W-12610-061416-SSH-1603

Date Collected: 06/14/16 09:30

Date Received: 06/15/16 09:10

Lab Sample ID: 240-66028-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			06/17/16 02:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		61 - 120				06/17/16 02:43	1
1,2-Dichloroethane-d4 (Surr)	94		78 - 125				06/17/16 02:43	1
Toluene-d8 (Surr)	98		80 - 120				06/17/16 02:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Client Sample ID: TB-12610-061416-SSH-1604

Date Collected: 06/14/16 09:35

Date Received: 06/15/16 09:10

Lab Sample ID: 240-66028-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			06/17/16 03:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		61 - 120		06/17/16 03:06	1
1,2-Dichloroethane-d4 (Surr)	89		78 - 125		06/17/16 03:06	1
Toluene-d8 (Surr)	90		80 - 120		06/17/16 03:06	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Client Sample ID: W-12610-061416-SSH-1603

Date Collected: 06/14/16 09:30

Date Received: 06/15/16 09:10

Lab Sample ID: 240-66028-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1
Aroclor-1221	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1
Aroclor-1232	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1
Aroclor-1242	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1
Aroclor-1248	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1
Aroclor-1254	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1
Aroclor-1260	0.095	U	0.095	ug/L		06/16/16 05:16	06/18/16 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	49		10 - 114	06/16/16 05:16	06/18/16 12:49	1
Tetrachloro-m-xylene	50		15 - 131	06/16/16 05:16	06/18/16 12:49	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Client Sample ID: W-12610-061416-SSH-1603

Date Collected: 06/14/16 09:30

Date Received: 06/15/16 09:10

Lab Sample ID: 240-66028-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	ug/L		06/16/16 11:10	06/17/16 23:18	1
Cadmium	2.0	U	2.0	ug/L		06/16/16 11:10	06/17/16 23:18	1
Chromium	5.0	U	5.0	ug/L		06/16/16 11:10	06/17/16 23:18	1
Copper	20	U	20	ug/L		06/16/16 11:10	06/17/16 23:18	1
Iron	390		100	ug/L		06/16/16 11:10	06/17/16 23:18	1
Nickel	20	U	20	ug/L		06/16/16 11:10	06/17/16 23:18	1
Lead	3.0	U	3.0	ug/L		06/16/16 11:10	06/17/16 23:18	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-061416-SSH-1603

Date Collected: 06/14/16 09:30

Date Received: 06/15/16 09:10

Lab Sample ID: 240-66028-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		06/20/16 12:00	06/21/16 09:08	1

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Client Sample Results

Client: GHD Services Inc.
 Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

General Chemistry

Client Sample ID: W-12610-061416-SSH-1603

Date Collected: 06/14/16 09:30

Date Received: 06/15/16 09:10

Lab Sample ID: 240-66028-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.7	U	4.7	mg/L			06/21/16 13:58	1
Ammonia (as N)	2.0	U	2.0	mg/L		06/22/16 09:00	06/22/16 13:57	1
Chemical Oxygen Demand	18		10	mg/L			06/20/16 11:05	1
pH	7.54	HF	0.100	SU			06/15/16 14:30	1
Biochemical Oxygen Demand	2.0	U	2.0	mg/L			06/15/16 14:17	1
Total Suspended Solids	4.0	U	4.0	mg/L			06/20/16 10:47	1
Total Phosphorus as P	0.10	U	0.10	mg/L			06/17/16 12:14	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

GC/MS VOA

Analysis Batch: 234858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	624	
240-66028-2	TB-12610-061416-SSH-1604	Total/NA	Water	624	
LCS 240-234858/6	Lab Control Sample	Total/NA	Water	624	
MB 240-234858/7	Method Blank	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 234711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	608	
LCS 240-234711/8-A	Lab Control Sample	Total/NA	Water	608	
MB 240-234711/7-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 235052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	608	234711
LCS 240-234711/8-A	Lab Control Sample	Total/NA	Water	608	234711
MB 240-234711/7-A	Method Blank	Total/NA	Water	608	234711

Metals

Prep Batch: 234790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total Recoverable	Water	200.7	
240-66028-1 MS	W-12610-061416-SSH-1603	Total Recoverable	Water	200.7	
240-66028-1 MSD	W-12610-061416-SSH-1603	Total Recoverable	Water	200.7	
LCS 240-234790/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-234790/1-A	Method Blank	Total Recoverable	Water	200.7	

Analysis Batch: 234992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total Recoverable	Water	200.7 Rev 4.4	234790
240-66028-1 MS	W-12610-061416-SSH-1603	Total Recoverable	Water	200.7 Rev 4.4	234790
240-66028-1 MSD	W-12610-061416-SSH-1603	Total Recoverable	Water	200.7 Rev 4.4	234790
LCS 240-234790/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	234790
MB 240-234790/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	234790

Prep Batch: 235199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	245.1	
LCS 240-235199/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-235199/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 235323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	245.1	235199
LCS 240-235199/2-A	Lab Control Sample	Total/NA	Water	245.1	235199
MB 240-235199/1-A	Method Blank	Total/NA	Water	245.1	235199

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

General Chemistry

Analysis Batch: 234638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	4500 H+ B-2000	
240-66028-1 DU	W-12610-061416-SSH-1603	Total/NA	Water	4500 H+ B-2000	
LCS 240-234638/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 234644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	5210B-2001	
LCS 240-234644/3	Lab Control Sample	Total/NA	Water	5210B-2001	
SCB 240-234644/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-234644/1	Method Blank	Total/NA	Water	5210B-2001	

Analysis Batch: 234993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	SM4500 P E-1999	
LCS 240-234993/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	
MB 240-234993/3	Method Blank	Total/NA	Water	SM4500 P E-1999	

Analysis Batch: 235127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	410.4	
LCS 240-235127/10	Lab Control Sample	Total/NA	Water	410.4	
LCS 240-235127/38	Lab Control Sample	Total/NA	Water	410.4	
MB 240-235127/37	Method Blank	Total/NA	Water	410.4	
MB 240-235127/9	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 235168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	SM 2540D	
LCS 240-235168/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 240-235168/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 235337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	1664A	
LCS 240-235337/25	Lab Control Sample	Total/NA	Water	1664A	
MB 240-235337/24	Method Blank	Total/NA	Water	1664A	

Prep Batch: 235552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	Distill/Ammonia	
LCS 240-235552/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 240-235552/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 235557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66028-1	W-12610-061416-SSH-1603	Total/NA	Water	350.2	235552
LCS 240-235552/2-A	Lab Control Sample	Total/NA	Water	350.2	235552
MB 240-235552/1-A	Method Blank	Total/NA	Water	350.2	235552

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Lab Sample ID: MB 240-234858/7
Matrix: Water
Analysis Batch: 234858

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			06/16/16 18:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		61 - 120		06/16/16 18:40	1
1,2-Dichloroethane-d4 (Surr)	87		78 - 125		06/16/16 18:40	1
Toluene-d8 (Surr)	86		80 - 120		06/16/16 18:40	1

Lab Sample ID: LCS 240-234858/6
Matrix: Water
Analysis Batch: 234858

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	23.1		ug/L		115	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		61 - 120
1,2-Dichloroethane-d4 (Surr)	101		78 - 125
Toluene-d8 (Surr)	99		80 - 120

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

Lab Sample ID: MB 240-234711/7-A
Matrix: Water
Analysis Batch: 235052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234711

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1
Aroclor-1221	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1
Aroclor-1232	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1
Aroclor-1242	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1
Aroclor-1248	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1
Aroclor-1254	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1
Aroclor-1260	0.10	U	0.10	ug/L		06/16/16 05:16	06/18/16 14:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	61		10 - 114	06/16/16 05:16	06/18/16 14:20	1
Tetrachloro-m-xylene	62		15 - 131	06/16/16 05:16	06/18/16 14:20	1

Lab Sample ID: LCS 240-234711/8-A
Matrix: Water
Analysis Batch: 235052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234711

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.59		ug/L		64	50 - 114
Aroclor-1260	2.50	1.55		ug/L		62	8 - 127

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Lab Sample ID: LCS 240-234711/8-A
Matrix: Water
Analysis Batch: 235052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234711

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	61		10 - 114
Tetrachloro-m-xylene	63		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-234790/1-A
Matrix: Water
Analysis Batch: 234992

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 234790

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	ug/L		06/16/16 11:10	06/17/16 23:10	1
Cadmium	2.0	U	2.0	ug/L		06/16/16 11:10	06/17/16 23:10	1
Chromium	5.0	U	5.0	ug/L		06/16/16 11:10	06/17/16 23:10	1
Copper	20	U	20	ug/L		06/16/16 11:10	06/17/16 23:10	1
Iron	100	U	100	ug/L		06/16/16 11:10	06/17/16 23:10	1
Nickel	20	U	20	ug/L		06/16/16 11:10	06/17/16 23:10	1
Lead	3.0	U	3.0	ug/L		06/16/16 11:10	06/17/16 23:10	1

Lab Sample ID: LCS 240-234790/2-A
Matrix: Water
Analysis Batch: 234992

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 234790

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits %Rec.
Silver	50.0	49.5		ug/L		99	85 - 115
Cadmium	50.0	51.7		ug/L		103	85 - 115
Chromium	200	197		ug/L		98	85 - 115
Copper	250	235		ug/L		94	85 - 115
Iron	1000	1040		ug/L		104	85 - 115
Nickel	500	508		ug/L		102	85 - 115
Lead	500	493		ug/L		99	85 - 115

Lab Sample ID: 240-66028-1 MS
Matrix: Water
Analysis Batch: 234992

Client Sample ID: W-12610-061416-SSH-1603
Prep Type: Total Recoverable
Prep Batch: 234790

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits %Rec.
Silver	5.0	U	50.0	49.0		ug/L		98	75 - 125
Cadmium	2.0	U	50.0	51.0		ug/L		102	75 - 125
Chromium	5.0	U	200	192		ug/L		96	75 - 125
Copper	20	U	250	242		ug/L		97	75 - 125
Iron	390		1000	1380		ug/L		99	75 - 125
Nickel	20	U	500	507		ug/L		100	75 - 125
Lead	3.0	U	500	480		ug/L		96	75 - 125

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 240-66028-1 MSD
Matrix: Water
Analysis Batch: 234992

Client Sample ID: W-12610-061416-SSH-1603
Prep Type: Total Recoverable
Prep Batch: 234790

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Silver	5.0	U	50.0	49.1		ug/L		98	75 - 125	0	20
Cadmium	2.0	U	50.0	50.9		ug/L		102	75 - 125	0	20
Chromium	5.0	U	200	193		ug/L		96	75 - 125	0	20
Copper	20	U	250	246		ug/L		98	75 - 125	1	20
Iron	390		1000	1380		ug/L		99	75 - 125	0	20
Nickel	20	U	500	506		ug/L		100	75 - 125	0	20
Lead	3.0	U	500	478		ug/L		96	75 - 125	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-235199/1-A
Matrix: Water
Analysis Batch: 235323

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235199

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		06/20/16 11:59	06/21/16 08:08	1

Lab Sample ID: LCS 240-235199/2-A
Matrix: Water
Analysis Batch: 235323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 235199

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

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-235337/24
Matrix: Water
Analysis Batch: 235337

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			06/21/16 13:58	1

Lab Sample ID: LCS 240-235337/25
Matrix: Water
Analysis Batch: 235337

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
HEM	40.0	33.8		mg/L		85	78 - 114

Method: 350.2 - Nitrogen, Ammonia, Distillation

Lab Sample ID: MB 240-235552/1-A
Matrix: Water
Analysis Batch: 235557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235552

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	2.0	U	2.0	mg/L		06/22/16 09:00	06/22/16 13:06	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Method: 350.2 - Nitrogen, Ammonia, Distillation (Continued)

Lab Sample ID: LCS 240-235552/2-A
Matrix: Water
Analysis Batch: 235557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 235552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	11.1	10.6		mg/L		96	85 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-235127/37
Matrix: Water
Analysis Batch: 235127

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	mg/L			06/20/16 11:06	1

Lab Sample ID: MB 240-235127/9
Matrix: Water
Analysis Batch: 235127

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	mg/L			06/20/16 10:54	1

Lab Sample ID: LCS 240-235127/10
Matrix: Water
Analysis Batch: 235127

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	36.6	37.8		mg/L		103	90 - 110

Lab Sample ID: LCS 240-235127/38
Matrix: Water
Analysis Batch: 235127

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	36.6	37.8		mg/L		103	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-234638/2
Matrix: Water
Analysis Batch: 234638

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	6.15	6.260		SU		102	97 - 103

Lab Sample ID: 240-66028-1 DU
Matrix: Water
Analysis Batch: 234638

Client Sample ID: W-12610-061416-SSH-1603
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.54	HF	7.550		SU		0.1	20

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Lab Sample ID: SCB 240-234644/2
Matrix: Water
Analysis Batch: 234644

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

Analyte	SCB Result	SCB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U s	2.0	mg/L			06/15/16 13:00	1

Lab Sample ID: USB 240-234644/1
Matrix: Water
Analysis Batch: 234644

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

Analyte	USB Result	USB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	mg/L			06/15/16 13:01	1

Lab Sample ID: LCS 240-234644/3
Matrix: Water
Analysis Batch: 234644

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 240-235168/1
Matrix: Water
Analysis Batch: 235168

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			06/20/16 10:47	1

Lab Sample ID: LCS 240-235168/2
Matrix: Water
Analysis Batch: 235168

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	82.3	82.0		mg/L		100	73 - 113

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-234993/3
Matrix: Water
Analysis Batch: 234993

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	mg/L			06/17/16 12:14	1

Lab Sample ID: LCS 240-234993/4
Matrix: Water
Analysis Batch: 234993

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	0.266	0.267		mg/L		100	53 - 134

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Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (61-120)	12DCE (78-125)	TOL (80-120)
240-66028-1	W-12610-061416-SSH-1603	87	94	98
240-66028-2	TB-12610-061416-SSH-1604	86	89	90
LCS 240-234858/6	Lab Control Sample	92	101	99
MB 240-234858/7	Method Blank	80	87	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

12DCE = 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)

Lab Sample ID	Client Sample ID	DCB2 (10-114)	TCX2 (15-131)
240-66028-1	W-12610-061416-SSH-1603	49	50
LCS 240-234711/8-A	Lab Control Sample	61	63
MB 240-234711/7-A	Method Blank	61	62

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Client Sample ID: W-12610-061416-SSH-1603

Lab Sample ID: 240-66028-1

Date Collected: 06/14/16 09:30

Matrix: Water

Date Received: 06/15/16 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	234858	06/17/16 02:43	TJL1	TAL CAN
Total/NA	Prep	608			234711	06/16/16 05:16	CSC	TAL CAN
Total/NA	Analysis	608		1	235052	06/18/16 12:49	LSH	TAL CAN
Total Recoverable	Prep	200.7			234790	06/16/16 11:10	AJC	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	234992	06/17/16 23:18	RKT	TAL CAN
Total/NA	Prep	245.1			235199	06/20/16 12:00	AJC	TAL CAN
Total/NA	Analysis	245.1		1	235323	06/21/16 09:08	DSH	TAL CAN
Total/NA	Analysis	1664A		1	235337	06/21/16 13:58	DTN	TAL CAN
Total/NA	Prep	Distill/Ammonia			235552	06/22/16 09:00	JAS	TAL CAN
Total/NA	Analysis	350.2		1	235557	06/22/16 13:57	JAS	TAL CAN
Total/NA	Analysis	410.4		1	235127	06/20/16 11:05	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	234638	06/15/16 14:30	JWW	TAL CAN
Total/NA	Analysis	5210B-2001		1	234644	06/15/16 14:17	LCN	TAL CAN
Total/NA	Analysis	SM 2540D		1	235168	06/20/16 10:47	GNR	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	234993	06/17/16 12:14	JWW	TAL CAN

Client Sample ID: TB-12610-061416-SSH-1604

Lab Sample ID: 240-66028-2

Date Collected: 06/14/16 09:35

Matrix: Water

Date Received: 06/15/16 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	234858	06/17/16 03:06	TJL1	TAL CAN

Laboratory References:

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

Certification Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-66028-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-16 *
Illinois	NELAP	5	200004	07-31-16 *
Kansas	NELAP	7	E-10336	07-31-16 *
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (WW)	State Program	4	98016	12-31-16
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16 *
New Jersey	NELAP	2	OH001	06-30-16 *
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-16 *
Texas	NELAP	6	T104704517-15-5	08-31-16 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16
Wisconsin	State Program	5	999518190	08-31-16 *

* Certification renewal pending - certification considered valid.

TestAmerica Canton

TestAmerica Michigan 0.8/2.1
 10448 Citation Drive
 Suite 200
 Brighton, MI 48116
 Phone: 810.229.2763 Fax:

Chain of Custody Record

149055

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

Regulatory Program: DW NPDES RCRA Other:

Project Manager: M. Tomka
 Tel/Fax: 519 884 0510
 Analysis Turnaround Time: WORKING DAYS
 CALENDAR DAYS
 TAT if different from Below: 2 weeks 1 week 2 days 1 day

Client Contact
 Company Name: GHD Services
 Address: 14496 N. Sheldon Rd. #200
 City/State/Zip: Plymouth, MI 48170
 Phone: 734 453 5123
 Project Name: Racor Trust Bay City
 Site: S50W 12610-103-013
 PO # Last# 24006288

Site Contact: SE Parlys Date: 6/14/16
 Lab Contact: D Hucker Carrier: FEFEY
 Perform MS / MSD (Y / N)
 Filtered Sample (Y / N)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:
W-12610-061716-SSH-1603	6/14/16	0930	C	WT 15	15	PH PCBs HEM WVYL chloride ISS COD BOD Metals N-NH3
TB-12610-061716-SSIT-1604	6/14/16	0935	G	TB 1	1	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other 129
 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

Special Instructions/QC Requirements & Comments:
 +Cd, Cr, Cu, Hg, Pb, Ni, Ag, Fe
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.: 738739
 Relinquished by: J.A. Noy
 Date/Time: 6/14/16 1500
 Company: GHD
 Received by: Regen Tendam
 Date/Time: 6-15-16 910
 Company: JA
 Received by: _____
 Date/Time: _____
 Company: _____
 Received in Laboratory by: _____
 Date/Time: _____
 Company: _____

Therm ID No.: _____
 Cooler Temp. (°C): Obs'd: _____ Corr'd: _____

240-66028 Chain of Custody



Login # : 66028

TestAmerica Canton Sample Receipt Form/Narrative

Canton Facility

Client GTH Site Name _____ Cooler unpacked by: Ryan Henderson

Cooler Received on 6-15-16 Opened on 6-15-16

FedEx: 1st Grd Exp UPS FAS Stetson 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 +1.3 °C) Observed Cooler Temp 0.8 °C Corrected Cooler Temp 2.1 °C
 IR GUN #36 (CF +1.0 °C) Observed Cooler Temp _____ °C Corrected Cooler Temp _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

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 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC574756

12. Were VOAs on the COC? Yes No

13. Were air bubbles >6 mm in any VOA vials? Yes No NA

14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B607501VB Yes No

15. Was a LL Hg or Me Hg trip blank present? Yes No

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

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

15. 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)

16. SAMPLE PRESERVATION

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

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

Ref: SOP NC-SC-0005, Sample Receiving

L:\QAQC\QA Department\QA TARDIS\Document Control\Work Instructions\In Revision\W1-NC-099-061316 Cooler Receipt Form.doc djf

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
W-12610-061416-SSH-1603	240-66028-I-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-061416-SSH-1603	240-66028-J-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-061416-SSH-1603	240-66028-N-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-061416-SSH-1603	240-66028-O-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____





Memorandum

September 27, 2016

To: Mike Tomka Ref. No.: 012610-T02

From: Nancy Bergstrom/tl/24/Det *NB* Tel: 734-453-5123

CC: Rawa Fleisher

**Subject: Analytical Results and Reduced Validation
2016 Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2016**

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the 2016 Semi-Annual Groundwater Sampling at the RACER Bay City Site during August 2016. 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, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS) and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) "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 - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for 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. Table 4 presents the sample data rejected due to outlying surrogate recoveries. All remaining surrogate recoveries met the above criteria.

5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

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

Organic Analyses

The LCS contained 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.



Organic Analyses

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.

There were no detections reported for the duplicate samples.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the 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 with the specific exceptions noted herein.

Table 1

Sample Collection and Analysis Summary
 2016 Semi-Annual Groundwater Sampling
 RACER Bay City Site
 Bay City, Michigan
 August 2016

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters		Comments
					SDG	MSD	
TA-NC SDG No.: 240-68766-1							
W-12610-082516-SSH-1606	CSA GW Ext. Sys. Discharge	Water	08/25/2016	08:15	X		
W-12610-082516-SSH-1607	MSA GW Ext. Sys. Discharge	Water	08/25/2016	08:30	X		
TA-NC SDG No.: 240-68828-1							
GW-12610-082616-SSH-1608	LMW15D	Water	08/26/2016	11:46	X		
GW-12610-082616-SSH-1609	LMW13S	Water	08/26/2016	12:56	X		
GW-12610-082616-SSH-1610	MW300S	Water	08/26/2016	14:21	X		
GW-12610-082616-SSH-1611	MW102D4	Water	08/26/2016	15:46	X		
GW-12610-082616-SSH-1612	MW102D2	Water	08/26/2016	16:56	X		MS/MSD
TA-NC SDG No.: 240-68867-1							
GW-12610-082716-SSH-1613	MW102D1	Water	08/27/2016	08:16	X		
GW-12610-082716-SSH-1614	MW102D1	Water	08/27/2016	08:26	X		FD (MW102D1)

Notes:

- FD - Field Duplicate sample of sample in parenthesis
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- PCB - Polychlorinated biphenyls
- TA-NC - TestAmerica Laboratories, Inc. - North Canton, Ohio
- SDG - Sample Delivery Group

Table 2

Validated Analytical Summary Results
 2016 Semi-Annual Groundwater Sampling
 RACER Bay City Site
 Bay City, Michigan
 August 2016

Location ID:	CSA GW Ext. Sys. Discharge	LMW13S	LMW15D
Sample Name:	W-12610-082516-SSH-1606	GW-12610-082616-SSH-1609	GW-12610-082616-SSH-1608
Sample Date:	08/25/2016	08/26/2016	08/26/2016
Depth:	--	--	--
Parameters	Unit	Unit	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	0.58	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

Table 2

Validated Analytical Summary Results
 2016 Semi-Annual Groundwater Sampling
 RACER Bay City Site
 Bay City, Michigan
 August 2016

Location ID: MSA GW Ext. Sys. Discharge MW102D1 MW102D1
 Sample Name: W-12610-082516-SSH-1607 GW-12610-082716-SSH-1613 GW-12610-082716-SSH-1614
 Sample Date: 08/25/2016 08/27/2016 08/27/2016
 Depth: -- -- Duplicate

Parameters Unit

Pesticides/PCBs

Aroclor-1016 (PCB-1016)	1.9 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	1.9 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	1.9 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	1.9 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	1.9 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	1.9 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	1.9 U	0.19 U	0.19 U

Table 2

Validated Analytical Summary Results
 2016 Semi-Annual Groundwater Sampling
 RACER Bay City Site
 Bay City, Michigan
 August 2016

Location ID:	MW102D2	MW102D4	MW300S
Sample Name:	GW-12610-082616-SSH-1612	GW-12610-082616-SSH-1611	GW-12610-082616-SSH-1610
Sample Date:	08/26/2016	08/26/2016	08/26/2016
Depth:	--	--	--
Parameters	Unit	Unit	Unit
Pesticides/PCBs			
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.15 J	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.045 J	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.19 U
			R
			R

Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit
- R - Rejected

Table 3

**Analytical Methods
2016 Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2016**

Parameter	Method	Matrix	Holding Time	
			Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
PCB	SW-846 8082	Water	7	40

Notes:

Method References:

- SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- PCB - Polychlorinated biphenyls

Table 4

**Qualified Sample Data Due to Outlying Surrogate Recoveries
2016 Semi-Annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2016**

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result	Units
PCB	W-12610-082516-SSH-1606	Decachlorobiphenyl	9	10-120	Aroclor-1254 Aroclor-1260	R R	µg/L µg/L
PCB	GW-12610-082616-SSH-1610	Decachlorobiphenyl	7	10-120	Aroclor-1254 Aroclor-1260	R R	µg/L µg/L

Notes:

- R - Rejected
- 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: 240-68766-1

Client Project/Site: 12610, RACER Bay City

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

9/9/2016 3:52:23 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



LINKS

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results through

TotalAccess

Have a Question?



Visit us at:

www.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.

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Case Narrative

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

TestAmerica Job ID: 240-68766-1

Job ID: 240-68766-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-68766-1

Comments

No additional comments.

Receipt

The samples were received on 8/26/2016 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

GC Semi VOA

Method(s) 8082A: The following sample was diluted due to the nature of the sample matrix: W-12610-082516-SSH-1607 (240-68766-2). Elevated reporting limits (RLs) are provided.

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: W-12610-082516-SSH-1606 (240-68766-1), W-12610-082516-SSH-1607 (240-68766-2), (240-68828-C-5-A), (240-68828-D-5-A MS) and (240-68828-B-5-A MSD).2672824, 2103098, 2586316.

Method(s) 8082A: Surrogate recovery for the following sample was outside control limits: W-12610-082516-SSH-1606 (240-68766-1). Re-extraction was performed with concurring results. The original analysis has been reported.

Method(s) 8082A: Surrogate recovery for the following sample was outside control limits: W-12610-082516-SSH-1607 (240-68766-2). Re-extraction was performed with concurring results. The original analysis has been 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: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-245126.

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, RACER Bay City

TestAmerica Job ID: 240-68766-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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, RACER Bay City

TestAmerica Job ID: 240-68766-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-68766-1	W-12610-082516-SSH-1606	Water	08/25/16 08:15	08/26/16 09:15
240-68766-2	W-12610-082516-SSH-1607	Water	08/25/16 08:30	08/26/16 09:15

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Detection Summary

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

TestAmerica Job ID: 240-68766-1

Client Sample ID: W-12610-082516-SSH-1606

Lab Sample ID: 240-68766-1

No Detections.

Client Sample ID: W-12610-082516-SSH-1607

Lab Sample ID: 240-68766-2

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

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

TestAmerica Job ID: 240-68766-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	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

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Client Sample Results

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

TestAmerica Job ID: 240-68766-1

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

Client Sample ID: W-12610-082516-SSH-1606

Lab Sample ID: 240-68766-1

Date Collected: 08/25/16 08:15

Matrix: Water

Date Received: 08/26/16 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 09:02	1
Aroclor-1221	0.19	U	0.19	0.087	ug/L		08/29/16 04:43	08/31/16 09:02	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/29/16 04:43	08/31/16 09:02	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		08/29/16 04:43	08/31/16 09:02	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 09:02	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/29/16 04:43	08/31/16 09:02	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/29/16 04:43	08/31/16 09:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	42		21 - 120	08/29/16 04:43	08/31/16 09:02	1
DCB Decachlorobiphenyl	9	X	10 - 120	08/29/16 04:43	08/31/16 09:02	1

Client Sample Results

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

TestAmerica Job ID: 240-68766-1

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

Client Sample ID: W-12610-082516-SSH-1607

Lab Sample ID: 240-68766-2

Date Collected: 08/25/16 08:30

Matrix: Water

Date Received: 08/26/16 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1.9	U	1.9	0.48	ug/L		08/29/16 04:43	08/31/16 15:10	10
Aroclor-1221	1.9	U	1.9	0.86	ug/L		08/29/16 04:43	08/31/16 15:10	10
Aroclor-1232	1.9	U	1.9	0.67	ug/L		08/29/16 04:43	08/31/16 15:10	10
Aroclor-1242	1.9	U	1.9	0.57	ug/L		08/29/16 04:43	08/31/16 15:10	10
Aroclor-1248	1.9	U	1.9	0.48	ug/L		08/29/16 04:43	08/31/16 15:10	10
Aroclor-1254	1.9	U	1.9	0.29	ug/L		08/29/16 04:43	08/31/16 15:10	10
Aroclor-1260	1.9	U	1.9	0.38	ug/L		08/29/16 04:43	08/31/16 15:10	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		21 - 120	08/29/16 04:43	08/31/16 15:10	10
DCB Decachlorobiphenyl	2	Xp	10 - 120	08/29/16 04:43	08/31/16 15:10	10

QC Association Summary

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

TestAmerica Job ID: 240-68766-1

GC Semi VOA

Prep Batch: 244595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68766-1	W-12610-082516-SSH-1606	Total/NA	Water	3520C	
240-68766-2	W-12610-082516-SSH-1607	Total/NA	Water	3520C	
MB 240-244595/16-A	Method Blank	Total/NA	Water	3520C	
LCS 240-244595/17-A	Lab Control Sample	Total/NA	Water	3520C	

Analysis Batch: 244934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68766-1	W-12610-082516-SSH-1606	Total/NA	Water	8082A	244595
240-68766-2	W-12610-082516-SSH-1607	Total/NA	Water	8082A	244595
MB 240-244595/16-A	Method Blank	Total/NA	Water	8082A	244595
LCS 240-244595/17-A	Lab Control Sample	Total/NA	Water	8082A	244595

QC Sample Results

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

TestAmerica Job ID: 240-68766-1

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

Lab Sample ID: MB 240-244595/16-A
Matrix: Water
Analysis Batch: 244934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244595

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.050	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1221	0.20	U	0.20	0.090	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1232	0.20	U	0.20	0.070	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1254	0.20	U	0.20	0.030	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		08/29/16 04:43	08/31/16 13:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	61		21 - 120	08/29/16 04:43	08/31/16 13:06	1
DCB Decachlorobiphenyl	66		10 - 120	08/29/16 04:43	08/31/16 13:06	1

Lab Sample ID: LCS 240-244595/17-A
Matrix: Water
Analysis Batch: 244934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244595

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	2.50	1.57		ug/L		63	32 - 120
Aroclor-1260	2.50	2.02		ug/L		81	36 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	64		21 - 120
DCB Decachlorobiphenyl	53		10 - 120

Surrogate Summary

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

TestAmerica Job ID: 240-68766-1

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	DCB1
		(21-120)	(10-120)
240-68766-1	W-12610-082516-SSH-1606	42	9 X
240-68766-2	W-12610-082516-SSH-1607	69	2 X p
LCS 240-244595/17-A	Lab Control Sample	64	53
MB 240-244595/16-A	Method Blank	61	66

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

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

TestAmerica Job ID: 240-68766-1

Client Sample ID: W-12610-082516-SSH-1606

Lab Sample ID: 240-68766-1

Date Collected: 08/25/16 08:15

Matrix: Water

Date Received: 08/26/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	244934	08/31/16 09:02	LSH	TAL CAN

Client Sample ID: W-12610-082516-SSH-1607

Lab Sample ID: 240-68766-2

Date Collected: 08/25/16 08:30

Matrix: Water

Date Received: 08/26/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		10	244934	08/31/16 15:10	LSH	TAL CAN

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 240-68766-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17
Illinois	NELAP	5	200004	07-31-17
Kansas	NELAP	7	E-10336	01-31-17
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (WW)	State Program	4	98016	12-31-16 *
Minnesota	NELAP	5	039-999-348	12-31-16 *
Minnesota (Petrofund)	State Program	1	3506	07-31-17
Nevada	State Program	9	OH-000482008A	07-31-17
New Jersey	NELAP	2	OH001	06-30-17
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-13-00319	11-26-16 *
Virginia	NELAP	3	460175	09-14-16 *
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

* Certification renewal pending - certification considered valid.



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

2.0 | C3.0

Chain of Custody Record

149063

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

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: **GHD**
 Address: **14496 N. Sheldon Blvd 200**
 City/State/Zip: **Plymouth MI 48170**
 Phone: **734 453 1513**
 Fax:
 Project Name: **RockTrust Bay City**
 Site: **12610 - TOL - 001916**
 P.O.#

Project Manager: **M. Tomka**
 Tell/Fax: **519 884 0510**
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below _____
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **SE Parlys** Date: **8/25/16**
 Lab Contact: **S. Hepler** Carrier: **FedEx**

COC No: **149063**
 of **1** COCs
 Sampler: **S. Hovuncy**
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Sample Specific Notes:
W-12610-082516-SSH-1606	8/25/16	0815	G	GW	2	N	N	RRS
W-12610-082516-SSH-1607	8/25/16	0830	G	GW	2	N	N	RRS
24J-68766 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 Unknown Poison B

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 Seal No.: **796967**
 Relinquished by: **At A. Noor** Date/Time: **8/25/16 17:00**
 Relinquished by: **GHD** Date/Time: **8/25/16 17:00**
 Relinquished by: **Regen Henderson** Date/Time: **8-26-16 9:15**
 Received by: **Regen Henderson** Company: **JA**
 Received by: _____ Company: _____
 Received in Laboratory by: _____ Company: _____

Cooler Temp. (°C): Obs'd: _____ Cor'd: _____ Therm ID No.: _____



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 1087660

Client GHD Site Name _____
 Cooler Received on 8-26-16 Opened on 8-26-16
 FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:
Ryan Kurberson

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: Water Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
 IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN# 36 (CF +1.0 °C) Observed Cooler Temp. 2.0 °C Corrected Cooler Temp. 3.0 °C

- 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
- Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
- Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
- 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?
 If yes, Questions 11-15 have been checked at the originating laboratory. Yes No NA
- 11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC574756
- 12. Were VOAs on the COC? Yes No NA
- 13. Were air bubbles >6 mm in any VOA vials? Yes No NA
- 14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- 15. Was a LL Hg or Me Hg trip blank present? Yes No

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

Samples processed by: _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. 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)

16. SAMPLE PRESERVATION

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

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: 240-68828-1

Client Project/Site: 12610, RACER Bay City

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

9/12/2016 9:20:55 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



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www.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.

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Case Narrative

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

TestAmerica Job ID: 240-68828-1

Job ID: 240-68828-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-68828-1

Comments

No additional comments.

Receipt

The samples were received on 8/27/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.6° C and 2.6° C.

GC Semi VOA

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-12610-082616-SSH-1608 (240-68828-1), GW-12610-082616-SSH-1609 (240-68828-2), GW-12610-082616-SSH-1610 (240-68828-3), GW-12610-082616-SSH-1611 (240-68828-4), GW-12610-082616-SSH-1612 (240-68828-5), GW-12610-082616-SSH-1612 (240-68828-5[MS]) and GW-12610-082616-SSH-1612 (240-68828-5[MSD]).2672824, 2103098, 2586316.

Method(s) 8082A: Surrogate recovery for the following sample was outside control limits: GW-12610-082616-SSH-1610 (240-68828-3). Re-extraction was performed with concurring results. The original analysis has been reported.

Method(s) 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-12610-082616-SSH-1609 (240-68828-2). 2688697, 2103100, 2283703.

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 analytical batch 240-245126.

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, RACER Bay City

TestAmerica Job ID: 240-68828-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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, RACER Bay City

TestAmerica Job ID: 240-68828-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-68828-1	GW-12610-082616-SSH-1608	Water	08/26/16 11:46	08/27/16 09:30
240-68828-2	GW-12610-082616-SSH-1609	Water	08/26/16 12:56	08/27/16 09:30
240-68828-3	GW-12610-082616-SSH-1610	Water	08/26/16 14:21	08/27/16 09:30
240-68828-4	GW-12610-082616-SSH-1611	Water	08/26/16 15:46	08/27/16 09:30
240-68828-5	GW-12610-082616-SSH-1612	Water	08/26/16 16:56	08/27/16 09:30

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Detection Summary

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

TestAmerica Job ID: 240-68828-1

Client Sample ID: GW-12610-082616-SSH-1608

Lab Sample ID: 240-68828-1

No Detections.

Client Sample ID: GW-12610-082616-SSH-1609

Lab Sample ID: 240-68828-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	0.58		0.19	0.048	ug/L	1		8082A	Total/NA

Client Sample ID: GW-12610-082616-SSH-1610

Lab Sample ID: 240-68828-3

No Detections.

Client Sample ID: GW-12610-082616-SSH-1611

Lab Sample ID: 240-68828-4

No Detections.

Client Sample ID: GW-12610-082616-SSH-1612

Lab Sample ID: 240-68828-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.15	J	0.20	0.059	ug/L	1		8082A	Total/NA
Aroclor-1254	0.045	J	0.20	0.030	ug/L	1		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

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

TestAmerica Job ID: 240-68828-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	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 Sample Results

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

TestAmerica Job ID: 240-68828-1

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

Client Sample ID: GW-12610-082616-SSH-1608

Lab Sample ID: 240-68828-1

Date Collected: 08/26/16 11:46

Matrix: Water

Date Received: 08/27/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 10:53	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		08/29/16 04:43	08/31/16 10:53	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/29/16 04:43	08/31/16 10:53	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/29/16 04:43	08/31/16 10:53	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 10:53	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/29/16 04:43	08/31/16 10:53	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/29/16 04:43	08/31/16 10:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	50		21 - 120	08/29/16 04:43	08/31/16 10:53	1
DCB Decachlorobiphenyl	14		10 - 120	08/29/16 04:43	08/31/16 10:53	1

Client Sample Results

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

TestAmerica Job ID: 240-68828-1

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

Client Sample ID: GW-12610-082616-SSH-1609

Lab Sample ID: 240-68828-2

Date Collected: 08/26/16 12:56

Matrix: Water

Date Received: 08/27/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	09/09/16 13:23	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		08/29/16 04:43	09/09/16 13:23	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/29/16 04:43	09/09/16 13:23	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/29/16 04:43	09/09/16 13:23	1
Aroclor-1248	0.58		0.19	0.048	ug/L		08/29/16 04:43	09/09/16 13:23	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/29/16 04:43	09/09/16 13:23	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/29/16 04:43	09/09/16 13:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	54		21 - 120				08/29/16 04:43	09/09/16 13:23	1
DCB Decachlorobiphenyl	31		10 - 120				08/29/16 04:43	09/09/16 13:23	1

Client Sample Results

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

TestAmerica Job ID: 240-68828-1

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

Client Sample ID: GW-12610-082616-SSH-1610

Lab Sample ID: 240-68828-3

Date Collected: 08/26/16 14:21

Matrix: Water

Date Received: 08/27/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 11:31	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		08/29/16 04:43	08/31/16 11:31	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/29/16 04:43	08/31/16 11:31	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/29/16 04:43	08/31/16 11:31	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 11:31	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/29/16 04:43	08/31/16 11:31	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/29/16 04:43	08/31/16 11:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	44		21 - 120				08/29/16 04:43	08/31/16 11:31	1
DCB Decachlorobiphenyl	7	X	10 - 120				08/29/16 04:43	08/31/16 11:31	1

Client Sample Results

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

TestAmerica Job ID: 240-68828-1

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

Client Sample ID: GW-12610-082616-SSH-1611

Lab Sample ID: 240-68828-4

Date Collected: 08/26/16 15:46

Matrix: Water

Date Received: 08/27/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 11:50	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		08/29/16 04:43	08/31/16 11:50	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/29/16 04:43	08/31/16 11:50	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/29/16 04:43	08/31/16 11:50	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/29/16 04:43	08/31/16 11:50	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/29/16 04:43	08/31/16 11:50	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/29/16 04:43	08/31/16 11:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	50		21 - 120				08/29/16 04:43	08/31/16 11:50	1
<i>DCB Decachlorobiphenyl</i>	26		10 - 120				08/29/16 04:43	08/31/16 11:50	1

Client Sample Results

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

TestAmerica Job ID: 240-68828-1

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

Client Sample ID: GW-12610-082616-SSH-1612

Lab Sample ID: 240-68828-5

Date Collected: 08/26/16 16:56

Matrix: Water

Date Received: 08/27/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.050	ug/L		08/29/16 04:43	08/31/16 12:09	1
Aroclor-1221	0.20	U	0.20	0.089	ug/L		08/29/16 04:43	08/31/16 12:09	1
Aroclor-1232	0.20	U	0.20	0.069	ug/L		08/29/16 04:43	08/31/16 12:09	1
Aroclor-1242	0.15	J	0.20	0.059	ug/L		08/29/16 04:43	08/31/16 12:09	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		08/29/16 04:43	08/31/16 12:09	1
Aroclor-1254	0.045	J	0.20	0.030	ug/L		08/29/16 04:43	08/31/16 12:09	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		08/29/16 04:43	08/31/16 12:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	52		21 - 120	08/29/16 04:43	08/31/16 12:09	1
DCB Decachlorobiphenyl	34		10 - 120	08/29/16 04:43	08/31/16 12:09	1

QC Association Summary

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

TestAmerica Job ID: 240-68828-1

GC Semi VOA

Prep Batch: 244595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68828-1	GW-12610-082616-SSH-1608	Total/NA	Water	3520C	
240-68828-2	GW-12610-082616-SSH-1609	Total/NA	Water	3520C	
240-68828-3	GW-12610-082616-SSH-1610	Total/NA	Water	3520C	
240-68828-4	GW-12610-082616-SSH-1611	Total/NA	Water	3520C	
240-68828-5	GW-12610-082616-SSH-1612	Total/NA	Water	3520C	
MB 240-244595/16-A	Method Blank	Total/NA	Water	3520C	
LCS 240-244595/17-A	Lab Control Sample	Total/NA	Water	3520C	
240-68828-5 MS	GW-12610-082616-SSH-1612	Total/NA	Water	3520C	
240-68828-5 MSD	GW-12610-082616-SSH-1612	Total/NA	Water	3520C	

Analysis Batch: 244934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68828-1	GW-12610-082616-SSH-1608	Total/NA	Water	8082A	244595
240-68828-3	GW-12610-082616-SSH-1610	Total/NA	Water	8082A	244595
240-68828-4	GW-12610-082616-SSH-1611	Total/NA	Water	8082A	244595
240-68828-5	GW-12610-082616-SSH-1612	Total/NA	Water	8082A	244595
MB 240-244595/16-A	Method Blank	Total/NA	Water	8082A	244595
LCS 240-244595/17-A	Lab Control Sample	Total/NA	Water	8082A	244595
240-68828-5 MS	GW-12610-082616-SSH-1612	Total/NA	Water	8082A	244595
240-68828-5 MSD	GW-12610-082616-SSH-1612	Total/NA	Water	8082A	244595

Analysis Batch: 246071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68828-2	GW-12610-082616-SSH-1609	Total/NA	Water	8082A	244595

QC Sample Results

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

TestAmerica Job ID: 240-68828-1

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

Lab Sample ID: MB 240-244595/16-A
Matrix: Water
Analysis Batch: 244934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244595

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.20	U	0.20	0.050	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1221	0.20	U	0.20	0.090	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1232	0.20	U	0.20	0.070	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1254	0.20	U	0.20	0.030	ug/L		08/29/16 04:43	08/31/16 13:06	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		08/29/16 04:43	08/31/16 13:06	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	61		21 - 120	08/29/16 04:43	08/31/16 13:06	1
DCB Decachlorobiphenyl	66		10 - 120	08/29/16 04:43	08/31/16 13:06	1

Lab Sample ID: LCS 240-244595/17-A
Matrix: Water
Analysis Batch: 244934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244595

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Aroclor-1016	2.50	1.57		ug/L		63	32 - 120
Aroclor-1260	2.50	2.02		ug/L		81	36 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	64		21 - 120
DCB Decachlorobiphenyl	53		10 - 120

Lab Sample ID: 240-68828-5 MS
Matrix: Water
Analysis Batch: 244934

Client Sample ID: GW-12610-082616-SSH-1612
Prep Type: Total/NA
Prep Batch: 244595

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Aroclor-1016	0.20	U	2.55	1.19		ug/L		47	24 - 121
Aroclor-1260	0.20	U	2.55	1.43		ug/L		56	10 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	50		21 - 120
DCB Decachlorobiphenyl	29		10 - 120

Lab Sample ID: 240-68828-5 MSD
Matrix: Water
Analysis Batch: 244934

Client Sample ID: GW-12610-082616-SSH-1612
Prep Type: Total/NA
Prep Batch: 244595

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Aroclor-1016	0.20	U	2.38	1.17		ug/L		49	24 - 121	2	30
Aroclor-1260	0.20	U	2.38	1.44		ug/L		60	10 - 120	0	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	44		21 - 120
DCB Decachlorobiphenyl	10	p	10 - 120

TestAmerica Canton

Surrogate Summary

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

TestAmerica Job ID: 240-68828-1

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 (21-120)	DCB1 (10-120)
240-68828-1	GW-12610-082616-SSH-1608	50	14
240-68828-2	GW-12610-082616-SSH-1609	54	31
240-68828-3	GW-12610-082616-SSH-1610	44	7 X
240-68828-4	GW-12610-082616-SSH-1611	50	26
240-68828-5	GW-12610-082616-SSH-1612	52	34
240-68828-5 MS	GW-12610-082616-SSH-1612	50	29
240-68828-5 MSD	GW-12610-082616-SSH-1612	44	10 p
LCS 240-244595/17-A	Lab Control Sample	64	53
MB 240-244595/16-A	Method Blank	61	66

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

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

TestAmerica Job ID: 240-68828-1

Client Sample ID: GW-12610-082616-SSH-1608

Lab Sample ID: 240-68828-1

Date Collected: 08/26/16 11:46

Matrix: Water

Date Received: 08/27/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	244934	08/31/16 10:53	LSH	TAL CAN

Client Sample ID: GW-12610-082616-SSH-1609

Lab Sample ID: 240-68828-2

Date Collected: 08/26/16 12:56

Matrix: Water

Date Received: 08/27/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	246071	09/09/16 13:23	KMG	TAL CAN

Client Sample ID: GW-12610-082616-SSH-1610

Lab Sample ID: 240-68828-3

Date Collected: 08/26/16 14:21

Matrix: Water

Date Received: 08/27/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	244934	08/31/16 11:31	LSH	TAL CAN

Client Sample ID: GW-12610-082616-SSH-1611

Lab Sample ID: 240-68828-4

Date Collected: 08/26/16 15:46

Matrix: Water

Date Received: 08/27/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	244934	08/31/16 11:50	LSH	TAL CAN

Client Sample ID: GW-12610-082616-SSH-1612

Lab Sample ID: 240-68828-5

Date Collected: 08/26/16 16:56

Matrix: Water

Date Received: 08/27/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244595	08/29/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	244934	08/31/16 12:09	LSH	TAL CAN

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 240-68828-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17
Illinois	NELAP	5	200004	07-31-17
Kansas	NELAP	7	E-10336	01-31-17
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (WW)	State Program	4	98016	12-31-16 *
Minnesota	NELAP	5	039-999-348	12-31-16 *
Minnesota (Petrofund)	State Program	1	3506	07-31-17
Nevada	State Program	9	OH-000482008A	07-31-17
New Jersey	NELAP	2	OH001	06-30-17
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-13-00319	11-26-16 *
Virginia	NELAP	3	460175	09-14-16 *
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

* Certification renewal pending - certification considered valid.

TestAmerica Canton

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

Chain of Custody Record

0.6/1.0/1.0/1.0/2.0

149065

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

Regulatory Program: DW NPDES RCRCA Other:

Client Contact
 Company Name: **GHD**
 Address: **14996 N. Sheldon St, Detroit**
 City/State/Zip: **Plymouth MI 48170**
 Phone: **734 753 5023**
 Fax:
 Project Name: **Raccoon Trust Bay City**
 Site: **12610 - T02 - 001416**
 P O #

Project Manager: **M. Tomlin**
 Tel/Fax: **519 884 0510**
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **SE Parady** Date: **8/26/16**
 Lab Contact: **O Hickler** Carrier: **Ridley**
 COC No: **149065** of **1** COCs
 Sampler: **S. Hovemyer**
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
GW-12610-082616-SSA-1608-1609	8/26/16	1146	G	GW	2
-1610		1256	G	GW	2
-1611		1421	G	GW	2
-1612		1546	G	GW	2
-1613		1656	G	GW	4
GW-12610-082616-SSA-1614			G	GW	2

Specific Notes:
 240-68828 Chain of Custody
 MS/MSA

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

Possible Hazard Identification: 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 Unknown

Special Instructions/QC Requirements & Comments:
12 total containers

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.: **542773 788426** Cooler Temp. (°C): Obs'd: _____ Corrd: _____ Therm ID No.: _____
 Relinquished by: **DEA, DM** Date/Time: **8/26/16 1800** Received by: **JAC** Date/Time: **08/27/16 930**
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____ Received in Laboratory by: _____ Date/Time: _____



TestAmerica Canton Sample Receipt Form/Narrative

Login # : 108825

Canton Facility

Client GHR Site Name _____ Cooler unpacked by: DSO
 Cooler Received on 08/27/16 Opened on 08/27/16
 FedEx: 1st Grd UPS FAS Stetson 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
 See Multiple Cooler Form

- Cooler temperature upon receipt
 IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +1.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
- Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 each Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
- Shippers' packing slip attached to the cooler(s)? Yes No
- Did custody papers accompany the sample(s)? Yes No
- Were the custody papers relinquished & signed in the appropriate place? Yes No
- Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- Did all bottles arrive in good condition (Unbroken)? Yes No
- Could all bottle labels be reconciled with the COC? Yes No
- Were correct bottle(s) used for the test(s) indicated? Yes No
- Sufficient quantity received to perform indicated analyses? Yes No
- Are these work share samples? Yes No
- If yes, Questions 11-15 have been checked at the originating laboratory.
- Were sample(s) at the correct pH upon receipt? Yes No pH Strip Lot# HC574756
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials? Yes No NA
- Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- Was a LL Hg or Me Hg trip blank present? Yes No

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

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

15. 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)

16. SAMPLE PRESERVATION

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

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: 240-68867-1

Client Project/Site: 12610, RACER Bay City

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

9/12/2016 1:10:39 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



LINKS

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results through

TotalAccess

Have a Question?



Visit us at:

www.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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



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Case Narrative

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

TestAmerica Job ID: 240-68867-1

Job ID: 240-68867-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-68867-1

Comments

No additional comments.

Receipt

The samples were received on 8/30/2016 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

GC Semi VOA

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-12610-082716-SSH-1614 (240-68867-2), 2688697, 2103098, 2586316.

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 analytical batch 240-244951.

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, RACER Bay City

TestAmerica Job ID: 240-68867-1

Qualifiers

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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, RACER Bay City

TestAmerica Job ID: 240-68867-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-68867-1	GW-12610-082716-SSH-1613	Water	08/27/16 08:16	08/30/16 09:20
240-68867-2	GW-12610-082716-SSH-1614	Water	08/27/16 08:26	08/30/16 09:20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 240-68867-1

Client Sample ID: GW-12610-082716-SSH-1613

Lab Sample ID: 240-68867-1

No Detections.

Client Sample ID: GW-12610-082716-SSH-1614

Lab Sample ID: 240-68867-2

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

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

TestAmerica Job ID: 240-68867-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	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 Sample Results

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

TestAmerica Job ID: 240-68867-1

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

Client Sample ID: GW-12610-082716-SSH-1613

Lab Sample ID: 240-68867-1

Date Collected: 08/27/16 08:16

Matrix: Water

Date Received: 08/30/16 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/31/16 04:43	09/02/16 12:14	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		08/31/16 04:43	09/02/16 12:14	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/31/16 04:43	09/02/16 12:14	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/31/16 04:43	09/02/16 12:14	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/31/16 04:43	09/02/16 12:14	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/31/16 04:43	09/02/16 12:14	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/31/16 04:43	09/02/16 12:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	26	p	21 - 120	08/31/16 04:43	09/02/16 12:14	1
DCB Decachlorobiphenyl	21	p	10 - 120	08/31/16 04:43	09/02/16 12:14	1

Client Sample Results

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

TestAmerica Job ID: 240-68867-1

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

Client Sample ID: GW-12610-082716-SSH-1614

Lab Sample ID: 240-68867-2

Date Collected: 08/27/16 08:26

Matrix: Water

Date Received: 08/30/16 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		08/31/16 04:43	09/02/16 12:32	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		08/31/16 04:43	09/02/16 12:32	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		08/31/16 04:43	09/02/16 12:32	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/31/16 04:43	09/02/16 12:32	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		08/31/16 04:43	09/02/16 12:32	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		08/31/16 04:43	09/02/16 12:32	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		08/31/16 04:43	09/02/16 12:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	61		21 - 120				08/31/16 04:43	09/02/16 12:32	1
<i>DCB Decachlorobiphenyl</i>	37		10 - 120				08/31/16 04:43	09/02/16 12:32	1

QC Association Summary

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

TestAmerica Job ID: 240-68867-1

GC Semi VOA

Prep Batch: 244951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68867-1	GW-12610-082716-SSH-1613	Total/NA	Water	3520C	
240-68867-2	GW-12610-082716-SSH-1614	Total/NA	Water	3520C	
MB 240-244951/15-A	Method Blank	Total/NA	Water	3520C	
LCS 240-244951/16-A	Lab Control Sample	Total/NA	Water	3520C	

Analysis Batch: 245276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-68867-1	GW-12610-082716-SSH-1613	Total/NA	Water	8082A	244951
240-68867-2	GW-12610-082716-SSH-1614	Total/NA	Water	8082A	244951
MB 240-244951/15-A	Method Blank	Total/NA	Water	8082A	244951
LCS 240-244951/16-A	Lab Control Sample	Total/NA	Water	8082A	244951

QC Sample Results

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

TestAmerica Job ID: 240-68867-1

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

Lab Sample ID: MB 240-244951/15-A
Matrix: Water
Analysis Batch: 245276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244951

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.20	U	0.20	0.050	ug/L		08/31/16 04:43	09/02/16 08:01	1
Aroclor-1221	0.20	U	0.20	0.090	ug/L		08/31/16 04:43	09/02/16 08:01	1
Aroclor-1232	0.20	U	0.20	0.070	ug/L		08/31/16 04:43	09/02/16 08:01	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		08/31/16 04:43	09/02/16 08:01	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		08/31/16 04:43	09/02/16 08:01	1
Aroclor-1254	0.20	U	0.20	0.030	ug/L		08/31/16 04:43	09/02/16 08:01	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		08/31/16 04:43	09/02/16 08:01	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	50		21 - 120	08/31/16 04:43	09/02/16 08:01	1
DCB Decachlorobiphenyl	41		10 - 120	08/31/16 04:43	09/02/16 08:01	1

Lab Sample ID: LCS 240-244951/16-A
Matrix: Water
Analysis Batch: 245276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244951

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Aroclor-1016	2.50	1.59		ug/L		64	32 - 120
Aroclor-1260	2.50	1.88		ug/L		75	36 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	63		21 - 120
DCB Decachlorobiphenyl	60		10 - 120

Surrogate Summary

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

TestAmerica Job ID: 240-68867-1

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 (21-120)	DCB1 (10-120)
240-68867-1	GW-12610-082716-SSH-1613	26 p	21 p
240-68867-2	GW-12610-082716-SSH-1614	61	37
LCS 240-244951/16-A	Lab Control Sample	63	60
MB 240-244951/15-A	Method Blank	50	41

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

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

TestAmerica Job ID: 240-68867-1

Client Sample ID: GW-12610-082716-SSH-1613

Lab Sample ID: 240-68867-1

Date Collected: 08/27/16 08:16

Matrix: Water

Date Received: 08/30/16 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244951	08/31/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	245276	09/02/16 12:14	LSH	TAL CAN

Client Sample ID: GW-12610-082716-SSH-1614

Lab Sample ID: 240-68867-2

Date Collected: 08/27/16 08:26

Matrix: Water

Date Received: 08/30/16 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			244951	08/31/16 04:43	CSC	TAL CAN
Total/NA	Analysis	8082A		1	245276	09/02/16 12:32	LSH	TAL CAN

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 240-68867-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17
Illinois	NELAP	5	200004	07-31-17
Kansas	NELAP	7	E-10336	01-31-17
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (WW)	State Program	4	98016	12-31-16 *
Minnesota	NELAP	5	039-999-348	12-31-16 *
Minnesota (Petrofund)	State Program	1	3506	07-31-17
Nevada	State Program	9	OH-000482008A	07-31-17
New Jersey	NELAP	2	OH001	06-30-17
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-13-00319	11-26-16 *
Virginia	NELAP	3	460175	09-14-16 *
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

* Certification renewal pending - certification considered valid.

TestAmerica Canton

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

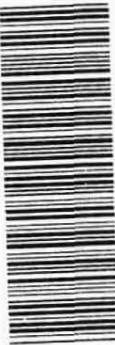
2.0/3.0

Chain of Custody Record

163340

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

Regulatory Program: DW NPDES RCRA Other:

Company Name: GHD Address: 1496 N. Sheldon Rd Ste 200 City/State/Zip: Plymouth, MI 48170 Phone: 734 453 5123 Fax:		Client Contact Project Name: Raw Trust Bay City Site: 12610-T02-001416 PO#		Project Manager: M Tomka Tel/Fax: 519 884 0510 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: SE Parlys Date: 8/27/16 Lab Contact: D. Huchler Carrier: FedEx Filtered Sample (Y/N) PLBS Perform MS / MSD (Y/N)		COC No: 163340 1 of 1 COCs Sampler: S. Hernandez For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:			
Sample Identification GW-12610-082716-SSH-1613 8/27/16 0816 G GW 2 NWX GW-12610-082716-SSH-1614 8/27/16 0822 G GW 2 NWX ASH				Sample Specific Notes:  240-68867 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. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Poison B			
Special Instructions/QC Requirements & Comments:				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months							
Relinquished by: St. A. Nany Date/Time: 8/20/16 9:30		Relinquished by: Date/Time:		Relinquished by: Date/Time:		Relinquished by: Date/Time:		Relinquished by: Date/Time:			
Custody Seal No.: 959495 Company: GHD		Cooler Temp. (°C): Obs'd: NA Corrd:		Therm ID No.:		Company: TA		Date/Time: 8-30-16 9:30			



TestAmerica Canton Sample Receipt Form/Narrative

Login # : 68867

Canton Facility

Client GAD Site Name _____
 Cooler Received on 8-30-16 Opened on 8-30-16
 FedEx: 1st Grd UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:

[Signature]

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 +1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +1.0°C) Observed Cooler Temp. 2-0 °C Corrected Cooler Temp. 3-0 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes 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 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC574756
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
15. Was a LL Hg or Me Hg trip blank present? Yes No

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

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) 1 & 2 (1413) were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

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