January 24, 2020 Reference No. 012610

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

Dear Ms. Armbruster:

**Re: 2019 Annual Technical Progress Report Submittal**
**RACER Trust Bay City Powertrain Industrial Lands**

GHD has prepared this 2019 Annual Technical Progress Report (Annual Report) for the Revitalizing Auto Communities Environmental Response Trust (RACER) Bay City Powertrain Industrial Land (Site) located in Bay City, Michigan.

This Annual Report covers the RACER Site for the period from November 16, 2018 through November 15, 2019, unless otherwise noted in the report. Included as part of this submittal, as applicable, are descriptions of actions related to the implementation of the Feasibility Study/Remedial Action Plan (FS/RAP), supplemental response actions and operation, maintenance, and monitoring activities. This annual report summarizes activities related to these action plans, outlines project status, and details any difficulties encountered during the implementation of the action plans.

# 1. Summary of On-Going Activities and Project Status

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

## 1.1 Remedial Action Plan

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

A groundwater treatment system has been designed to provide operational independence from the treatment system at the neighboring General Motors LLC facility which previously treated groundwater and stormwater from the RACER Site. The need for this system resulted from the outcome of the General Motors Corporation (GMC) June 2009 bankruptcy (i.e., RACER received ownership of the Site and GM

LLC obtained ownership of the adjacent operating facility). The construction of the system was initiated in November 2012 and was fully commissioned in April 2015. New groundwater extraction pumps and associated well upgrades were completed as part of the new groundwater treatment system construction.

### 1.1.1 Operation and Maintenance Activities

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

### 1.1.2 Operation and Maintenance Activities–Groundwater Extraction System

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

The groundwater treatment system operated regularly during the 12-month period covered by this report. Groundwater levels in the entire Crotty Street Channel (CSC) are lowered through the operation of a pump in CSC extraction well EW-15, since the entire CSC is hydraulically well connected due to the porous nature of the soils (backfill was pea gravel and sand) in the CSC. In addition, groundwater levels in the Machine Storage Area (MSA) are lowered through the operation of pumps in MSA extraction wells EW-6, EW-8, and EW12, which discharge to EW-15. The pump in EW-15 directs water to the RACER groundwater treatment system where the extracted water is treated before being discharged to the City of Bay City sanitary sewer system.

### 1.1.3 Operation and Maintenance Activities – Groundwater Treatment System

From February 2015, when the groundwater treatment system was fully commissioned, through November 15, 2019 approximately 884,837 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 13, 2019 and May 31, 2019. There were no exceedances of permit discharge standards observed, as presented in Table 3.

### 1.1.4 Saginaw River Levels at Essexville, Michigan

Saginaw River water levels have been recorded downstream from the RACER Property at Essexville by the National Oceanic and Atmospheric Administration (NOAA) from 1977 until 2005. Due to the

unavailability of the data from the NOAA website, data was obtained from USGS station (04157065 Saginaw River at Weadock Road at Essexville, MI) and used for water elevation data of the Saginaw River, as of November 1, 2005. On December 4, 2013 USGS station 04157065 was removed from service so data was obtained from USGS station (04157060 Saginaw River at Midland Road at Bay City, MI) and used for water elevation data of the Saginaw River, as of November 16, 2013. On September 3, 2017 USGS station 04157060 was destroyed. GHD is currently exploring other options for measuring the Saginaw River water levels, and will include manual measurements from the top of the sheetpile wall (SG-6) in their monthly inspections going forward until another USGS station is installed or another source of Saginaw River water levels is identified.

Based on the combined NOAA and USGS data from 1977 to September 2, 2017, the average Saginaw River water level is approximately 578.89 feet (ft) above mean sea level (AMSL). Recent water levels were above the average, as the current water level measured at SG-6 on December 4, 2019 was 581.45 ft AMSL.

### 1.1.5 Extraction System/Groundwater Monitoring Activities

Table 4 presents the sample results for the extraction system discharge samples (i.e., the groundwater treatment system influent). The 19th annual groundwater sampling event (August 2019) was also conducted during this reporting period. Table 5 presents the 19th annual groundwater sampling event analytical results summary. Table 3 presents the analytical results for the semi-annual samples collected from the groundwater treatment system effluent. Figure 1 presents the locations sampled for chemical analysis. Figure 2 presents the location where depth-to-water measurements for groundwater are monitored. Groundwater elevations, based on depth-to-water measurements are presented in Tables 1 and 2 for extraction wells and monitoring wells, respectively. Groundwater elevations, based on the depth-to-water measurements collected on December 12, 2019 are presented on Figure 3.

A summary of the last 10 years of analytical groundwater data is presented in Attachment B. The laboratory data reports for all chemical analysis conducted in the reporting period (November 16, 2018 to November 15, 2019) and data validation for the 2019 annual sampling event are presented in Attachment C.

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

### 1.2 Supplemental Response Actions

A Declaration of Restrictive Covenant for the Site was recorded with the Bay County Register of Deeds on November 17, 2015. The location and content of permanent markers were reviewed and approved by the MDEQ on November 4, 2015. The permanent markers have been manufactured and will be installed following the completion of pending stormwater work that is necessary as a result of the GMC bankruptcy process. Based on planned stormwater work and other information it will be necessary to prepare a revised DRC.

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 storm water modifications are completed, which are the last of 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.

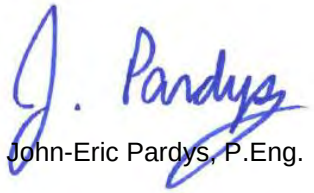
As part of the 2020 monitoring program, RACER will continue to perform monthly extraction and treatment system inspections and regular pump maintenance, as necessary. RACER will also collect semi-annual groundwater treatment system influent samples (to be completed in April and August 2020) and semi-annual effluent samples. The 2020 annual groundwater monitoring event will be completed in August 2020.

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

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

Sincerely,

GHD



John-Eric Pardys, P.Eng.

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| | |
|---|---|
| Figure 1 | Chemical Analysis Monitoring Locations |
| Figure 2 | Water Elevation Monitoring Locations |
| Figure 3 | Shallow Groundwater Elevations – December 12, 2019 |
| Table 1 | Groundwater Extraction System Water Elevations |
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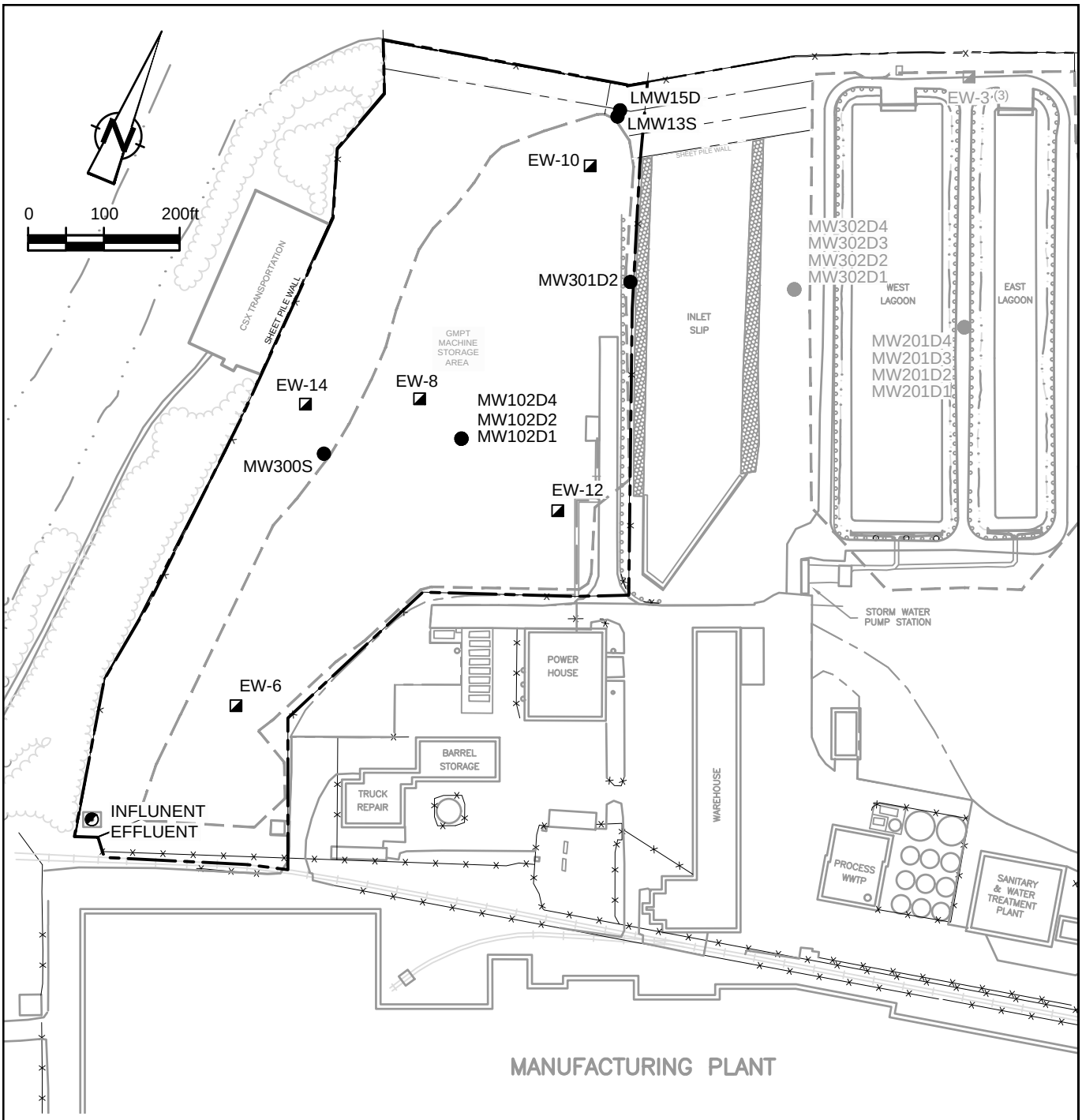
| Attachment A | Maintenance Activity Checklists |
| Attachment B | Analytical Results Summary (2009 to 2019) |
| Attachment C | Laboratory Reports and Data Validation Memorandums |

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




## LEGEND

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

MW403S ● MONITORING WELL LOCATION

EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION

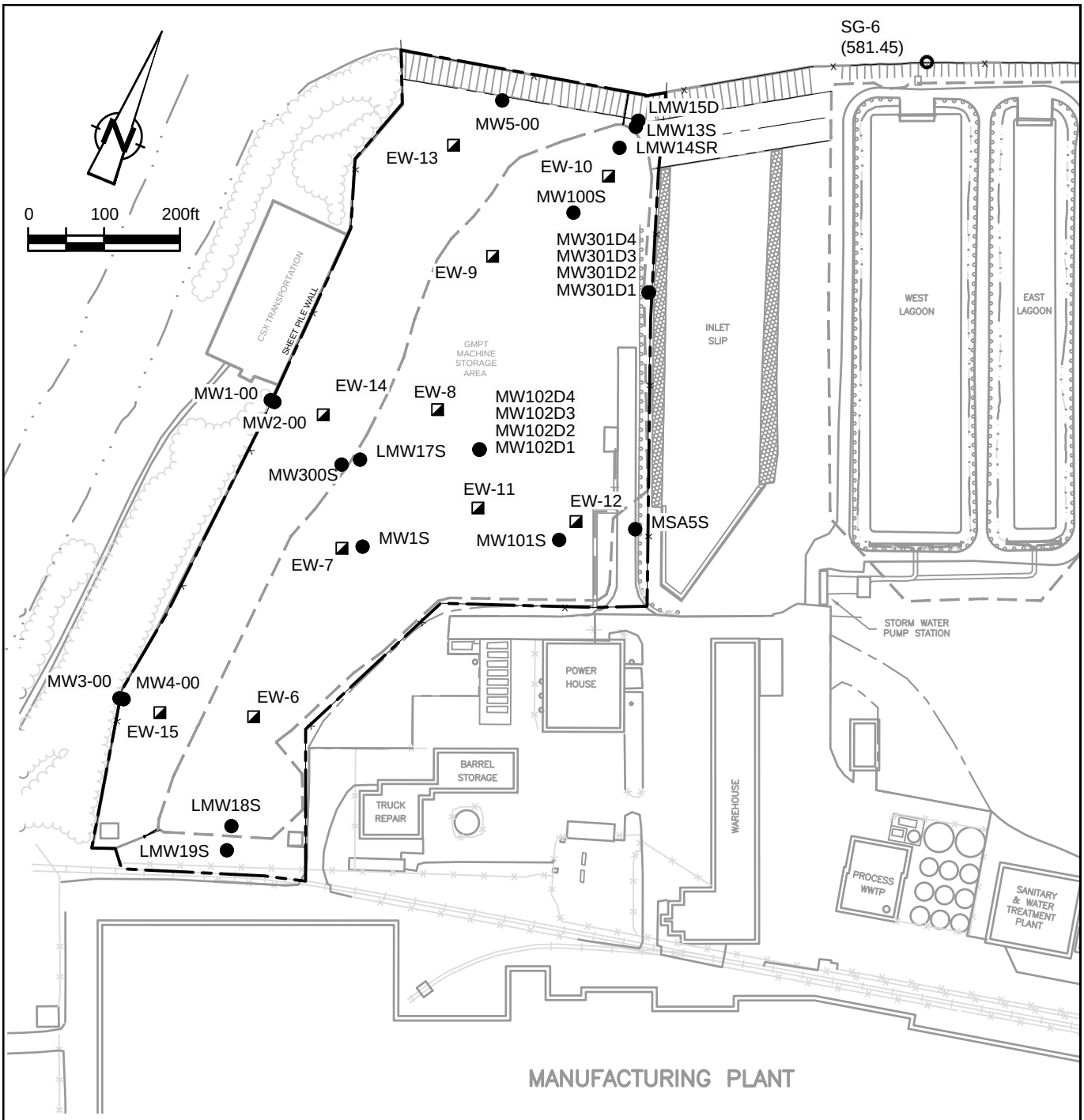
◓ GROUNDWATER TREATMENT SYSTEM SAMPLE LOCATION

figure 1

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

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

N:\CA\Waterloo\Legacy\CAD\drawings\12000s\12610\12610-corrs\12610-T04(ARMB003)\12610-T04(ARMB003)GN\12610-T04(ARMB003)GN-WA001.DWG Plot Date: JAN 21, 2020




## LEGEND

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MW403S ● MONITORING WELL LOCATION

EW-6 ◪ EXTRACTION WELL LOCATION

SG-1 ◪ STAFF GAGE LOCATION

figure 2

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

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

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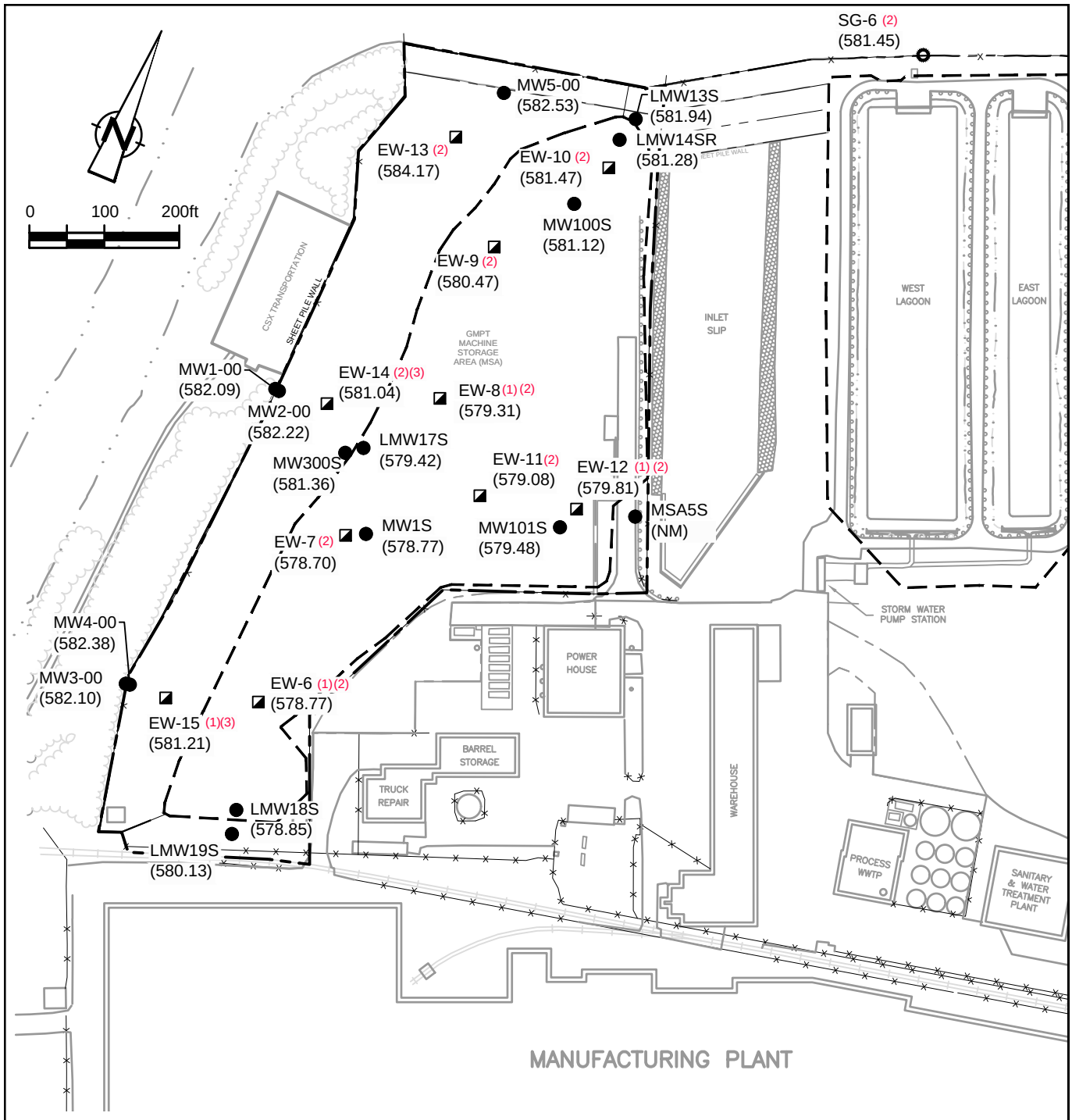


## LEGEND

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

MW403S ● MONITORING WELL LOCATION (WATER LEVELS MONITORED ANNUALLY)

SG-1 ○ STAFF GAGE LOCATION

EW-6 ◪ GROUNDWATER EXTRACTION WELL LOCATION (WATER LEVELS MONITORED MONTHLY)

(578.44) GROUNDWATER ELEVATION (ft. AMSL)

(1) PUMP LOCATION

(2) WATER LEVEL MEASURED ON DEC. 4, 2019

(3) WELL FLOODED

figure 3

# SHALLOW GROUNDWATER ELEVATIONS DECEMBER 12, 2019 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

N:\CA\Waterloo\Legacy\CAD\drawings\12000s\12610\12610-corrs\12610-T04(ARMB004)\12610-T04(ARMB004)GN\12610-T04(ARMB004)GN-WA001.DWG Plot Date: JAN 21, 2020

**Table 1**

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

| Location | Reference Elevation | Bottom of Well Elevation (ft AMSL) | Top ICU Top ICU (ft AMSL) | Water Elevation (ft AMSL) Dec. 12, 2018 | Water Elevation (ft AMSL) Jan. 29, 2019 | Water Elevation (ft AMSL) Feb. 28, 2019 | Water Elevation (ft AMSL) Mar. 22, 2019 | Water Elevation (ft AMSL) Apr. 19, 2019 | Water Elevation (ft AMSL) 17-May-19 | Water Elevation (ft AMSL) Jun. 24, 2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Machine Storage Area** | | | | | | | | | | |
| EW-6 | 589.74 | 570.39 | 572.39 | 578.11 | 577.95 (1) | 577.83 (1) | 577.93 (1) | 578.01 | 578.05 (1) | 578.46 (1) |
| EW-7 | 587.99 | 571.14 | 571.64 | 578.61 | 578.58 | 578.53 | 578.61 | 578.65 | 578.66 | 578.69 |
| EW-8 | 588.34 | 572.29 | 573.29 | 579.07 | 579.06 | 578.85 (1) | 579.06 (1) | 579.12 | 579.25 (1) | 579.3 (1) |
| EW-9 | 588.04 | 572.19 | 573.69 | 579.94 | 579.93 | 579.86 | 580.01 | 579.88 | 580.05 | 580.23 |
| EW-10 | 587.77 | 570.82 | 572.32 | 580.2 | 580.18 | 579.88 | 580.21 | 580.4 | 580.81 | 581.33 |
| EW-11 | 591.51 | 571.91 | 572.56 | 578.93 | 578.82 (1) | 578.79 (1) | 578.7 (1) | 578.82 (1) | 578.92 (1) | 579.04 (1) |
| EW-12 | 586.42 | 571.57 | 573.07 | 579.43 | 579.05 (1) | 579.01 (1) | 579.34 (1) | 579.59 (1) | 579.49 (1) | 579.44 (1) |
| **Crotty Street Channel Containment Area** | | | | | | | | | | |
| EW-13 | 584.33 | 571.86 | NA | 581.04 | 580.84 | 580.76 | 581.41 | 582.54 | 581.86 | 582.6 |
| EW-14 | 582.42 | 569.92 | NA | 581.03 | 580.69 | 579.59 | 581.8 | (2) | (2) | (2) |
| EW-15 | 583.71 | 571.61 | NA | 580.83 | 580.6 | 580.58 | 581.32 | (2) | 581.47 | -- |
| **Saginaw River** | | | | | | | | | | |
| SG-6 | 587.16 | NA | NA | -- | 580.73 | -- | 581.03 | 581.77 | 581.45 | -- |

Notes:

ICU Intermediate Confining Unit
-- No Level recorded
-- Not applicable
(1) Product identified in well
(2) Well flooded

**Table 1**

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

| Location | Reference Elevation | Bottom of Well Elevation (ft AMSL) | Top ICU Top ICU (ft AMSL) | Water Elevation (ft AMSL) Jul. 17, 2019 | Water Elevation (ft AMSL) Aug. 28, 2019 | Water Elevation (ft AMSL) Sept. 30, 2019 | Water Elevation (ft AMSL) Oct. 29, 2019 | Water Elevation (ft AMSL) Nov. 25, 2019 | Water Elevation (ft AMSL) Dec. 4, 2019 |
|---|---|---|---|---|---|---|---|---|---|
| **Machine Storage Area** | | | | | | | | | |
| EW-6 | 589.74 | 570.39 | 572.39 | 578.57 (1) | 578.75 (1) | 578.76 (1) | 578.56 (1) | 577 (1) | 578.77 (1) |
| EW-7 | 587.99 | 571.14 | 571.64 | 578.6 | 578.62 | 578.6 | 578.64 | 578.66 | 578.70 |
| EW-8 | 588.34 | 572.29 | 573.29 | 579.23 (1) | 579.15 (1) | 578.97 | 579.13 (1) | 579.28 | 579.31 (1) |
| EW-9 | 588.04 | 572.19 | 573.69 | 580.31 | 580.39 | 580.29 | 580.29 | 580.48 | 580.47 |
| EW-10 | 587.77 | 570.82 | 572.32 | 581.31 | 581.28 | 581.06 | 581.01 | 581.42 | 581.47 |
| EW-11 | 591.51 | 571.91 | 572.56 | 578.9 (1) | 578.78 (1) | 578.82 | 578.89 (1) | 579.02 (1) | 579.08 |
| EW-12 | 586.42 | 571.57 | 573.07 | 579.04 (1) | 578.85 (1) | 579.11 (1) | 579.34 (1) | 579.46 (1) | 579.81 (1) |
| **Crotty Street Channel Containment Area** | | | | | | | | | |
| EW-13 | 584.33 | 571.86 | NA | 582.27 | 581.61 | 582.17 | 582.5 | 582.45 | 584.17 |
| EW-14 | 582.42 | 569.92 | NA | (2) | (2) | (2) | (2) | (2) | (2) |
| EW-15 | 583.71 | 571.61 | NA | 582.08 | 581.8 | 582.24 | 582.68 | 582.00 | (2) |
| **Saginaw River** | | | | | | | | | |
| SG-6 | 587.16 | NA | NA | 580.81 | 581.6 | 581.43 | 581.74 | 581.54 | 581.45 |

Notes:

ICU Intermediate Confining Unit
-- No Level recorded
-- Not applicable
(1) Product identified in well
(2) Well flooded

**Table 2**

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

| Well Location | Top of Riser Elevation (ft AMSL) | Depth of Well (feet) | Screen Length (feet) | Screen Type | Riser Type | Diameter of Screen (inches) | Groundwater Elevation (feet AMSL) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 12/12/2019 | 12/19/2018 | 8/23/2017 | 12/8/2016 | 8/24/2015 | 8/6/2014 | 8/6/2013 | 8/7/2012 | 8/22/2011 | 8/16/2010 |
| **Machine Storage Area (MSA)** | | | | | | | | | | | | | | | | |
| LMW13S | 589.40 | 19.22 | 10 | SS | PVC | 2 | 581.94 | 580.46 | 580.72 | 580.01 | 580.10 | 579.43 | 578.61 | 578.19 | 578.03 | 578.71 |
| LMW17S | 589.31 | 19.83 | 10 | SS | PVC | 2 | 579.42 | 579.13 | 579.17 | 578.79 | 579.13 | 578.96 | 578.87 | 578.85 | 578.80 | 578.83 |
| LMW18S | 592.33 | 22.52 | 10 | SS | PVC | 2 | 578.85 | 578.64 | 578.48 | 578.17 | 578.62 | 578.27 | 577.93 | 577.82 | 577.61 | 577.66 |
| LMW19S | 588.61 | 19.32 | 10 | SS | PVC | 2 | 580.13 | 579.10 | 578.99 | 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 | 578.79 | 578.76 | 578.77 | 578.73 | 578.71 | 578.80 | 578.65 | 578.65 | 578.68 |
| MW100S | 591.97 | 14.44 | 10 | SS | SS | 2 | 581.12 | 580.58 | 580.69 | 579.80 | 580.19 | 579.32 | 578.81 | 578.49 | 578.18 | 578.86 |
| MW101S | 593.34 | 19.22 | 10 | SS | SS | 2 | 579.48 | 579.44 | 578.99 | 579.17 | 579.12 | 579.01 | 579.10 | 578.94 | 578.80 | 578.93 |
| MW102D1 | 594.86 | 30.99 | 10 | SS | SS | 2 | 581.55 | 580.18 | 580.86 | 579.30 | 579.88 | 579.39 | 578.34 | 577.90 | 578.71 | 578.39 |
| MW102D2 | 594.93 | 36.21 | 10 | SS | SS | 2 | 581.53 | 580.15 | 580.85 | 579.37 | 579.86 | 579.38 | 578.31 | 577.89 | 578.69 | 578.37 |
| MW102D3 | 594.91 | 46.74 | 10 | SS | SS | 2 | 581.52 | 580.15 | 580.78 | 579.25 | 579.83 | 579.35 | 578.27 | 577.84 | 578.67 | 579.34 |
| MW102D4 (replacement) | 594.90 | 56.85 | 10 | SS | SS | 2 | 581.44 | 580.08 | 580.74 | 579.19 | 579.77 | 579.30 | 578.24 | 577.79 | 578.63 | 578.29 |
| MW300S | 587.12 | 15.06 | 10 | SS | SS | 2 | 581.36 | 580.86 | 579.97 | 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 | 581.28 | 580.54 | 580.69 | 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 | 581.63 | 580.16 | 580.93 | 579.16 | 579.68 | 579.37 | 578.02 | 577.56 | 578.65 | 578.21 |
| MW301D1 | 589.54 | 27.50 | 10 | SS | SS | 2 | 579.88 | 578.51 | 579.24 | 577.60 | 578.15 | 577.70 | 576.56 | 578.38 | 579.39 | 578.96 |
| MW301D2 | 589.16 | 37.24 | 10 | SS | SS | 2 | 579.97 | 578.56 | 579.31 | 577.67 | 578.22 | 577.78 | 576.62 | 577.99 | 579.00 | 578.60 |
| MW301D3 | 589.22 | 44.04 | 10 | SS | SS | 2 | 579.82 | 578.43 | 579.17 | 577.53 | 578.06 | 577.64 | 576.46 | 577.87 | 578.87 | 578.47 |
| MW301D4 | 589.33 | 55.95 | 10 | SS | SS | 2 | 579.92 | 578.52 | 579.25 | 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 | n/a | 588.60 | 579.97 | 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 | 582.09 | 580.55 | 579.67 | 579.16 | 579.79 | 579.35 | 577.71 | 576.44 | 577.17 | 577.13 |
| MW2-00 | 589.29 | 18.00 | 7 | SS | SS | 2 | 582.22 | 580.65 | 581.58 | 578.84 | 579.35 | 578.75 | 577.79 | 576.62 | 577.29 | 577.26 |
| MW3-00 | 588.40 | 12.50 | 7 | SS | SS | 2 | 582.10 | 580.48 | 580.60 | 579.15 | 579.76 | 579.38 | 577.67 | 576.47 | 577.25 | 577.14 |
| MW4-00 | 589.65 | 19.00 | 7 | SS | SS | 2 | 582.38 | 580.81 | 580.87 | 579.03 | 579.54 | 578.91 | 577.90 | 576.76 | 577.41 | 577.38 |
| MW5-00 | 588.89 | 13.00 | 7 | SS | SS | 2 | 582.53 | 581.31 | 580.15 | 577.22 | 577.70 | 576.99 | 577.00 | 576.73 | 576.77 | 576.95 |
| SG-1 | 580.00 | - - | - - | - - | - - | - - | n/a | n/a | n/a | n/a | n/a | 581.06 | n/a | n/a | n/a | n/a |
| **Saginaw River Elevation [6]** | | | | | | | 581.48 | 580.05 | 580.79 | 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 2018, and measured at the sheet pile wall (SG-6) from 2018 to present.
(7) Could not read due to well being covered with equipment
n/a Water elevation not available

**Table 2**

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

| Well Location | Top of Riser Elevation (ft AMSL) | Depth of Well (feet) | Screen Length (feet) | Screen Type | Riser Type | Diameter of Screen (inches) | Groundwater Elevation (feet AMSL) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 8/27/2009 | 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 2018, and measured at the sheet pile wall (SG-6) from 2018 to present.
(7) Could not read due to well being covered with equipment
n/a Water elevation not available

**Table 2**

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

| Well Location | Top of Riser Elevation (ft AMSL) | Depth of Well (feet) | Screen Length (feet) | Screen Type | Riser Type | Diameter of Screen (inches) | Groundwater Elevation (feet AMSL) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 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 | 1/4/2000 |
| **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 | 580.08 |
| 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 | 579.47 |
| 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 | 577.37 |
| 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 | 580.30 |
| 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 | 579.07 |
| 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 | 577.49 |
| 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 | 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 | 576.80 |
| 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 | 576.67 |
| 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 | 576.71 |
| 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 | 576.56 |
| 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 | 579.27 |
| 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 | Damaged |
| **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 | 577.95 |
| 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 | 578.05 |
| 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 | 577.99 |
| 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 | 577.96 |
| 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 | 577.90 |
| **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 | 581.42 |
| **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 | n/a |
| 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 | n/a |
| 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 | n/a |
| 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 | n/a |
| 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 | n/a |
| SG-1 | 580.00 | - - | - - | - - | - - | - - | (5) | 577.33 | 577.43 | 577.93 | 578.05 | Destroyed (3) | Destroyed (3) | Destroyed | 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 | 577.15 |

Notes:

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

**Table 2**

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

| Well Location | Top of Riser Elevation (ft AMSL) | Depth of Well (feet) | Screen Length (feet) | Screen Type | Riser Type | Diameter of Screen (inches) | Groundwater Elevation (feet AMSL) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 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 | 580.68 | 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 | 579.71 | 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 | 577.32 | 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 | 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 | 579.15 | 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 | 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 | 579.65 | 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 | 576.38 | 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 | 576.24 | 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 | 576.26 | 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 | 576.12 | 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 | 579.91 | 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 | 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 | 577.18 | 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 | 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 | 577.35 | 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 | 577.32 | 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 | 577.27 | 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 | 581.70 | 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| SG-1 | 580.00 | - - | - - | - - | - - | - - | Destroyed | Destroyed | Destroyed | Destroyed | Destroyed | Destroyed | Destroyed | Destroyed | Destroyed | Destroyed |
| **Saginaw River Elevation [6]** | | | | | | | 576.54 | 577.35 | 578.04 | 578.59 | 578.87 | 578.51 | 578.37 | 578.32 | 578.55 | 578.34 |

Notes:

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

**Table 3**

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

| **Sample Location:** | | | **effluent-GWTS** | **effluent-GWTS** |
|---|---|---|---|---|
| **Sample ID:** | | | **WT-12610-121318-SSH-18112** | **W-12610-053113-SSH-00319** |
| **Sample Date:** | | | **12/13/2018** | **5/31/2019** |
| **Parameters** | **Units** | **Daily Maximum[(1)]** | | |
| **VOAs** | | | | |
| Vinyl chloride | mg/L | 0.002 | 0.001 U | 0.001 U |
| **Metals** | | | | |
| Cadmium | mg/L | 0.057 | 0.002 U | 0.002 U |
| Chromium | mg/L | 6.812 | 0.005 U | 0.0017 J |
| Copper | mg/L | 1.476 | 0.02 U | 0.012 J |
| Iron | mg/L | -- | 0.07 J | 0.11 |
| Lead | mg/L | 0.632 | 0.003 U | 0.003 U |
| Mercury | mg/L | ND | 0.0002 U | 0.0002 U |
| Nickel | mg/L | 2.548 | 0.0029 J | 0.0059 J |
| Silver | mg/L | 0.2 | 0.005 U | 0.005 U |
| **Pesticides** | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | ND | 0.000095 U | 0.000096 U |
| Aroclor-1221 (PCB-1221) | mg/L | ND | 0.000095 U | 0.000096 U |
| Aroclor-1232 (PCB-1232) | mg/L | ND | 0.000095 U | 0.000096 U |
| Aroclor-1242 (PCB-1242) | mg/L | ND | 0.000095 U | 0.000096 U |
| Aroclor-1248 (PCB-1248) | mg/L | ND | 0.000095 U | 0.000096 U |
| Aroclor-1254 (PCB-1254) | mg/L | ND | 0.000095 U | 0.000096 U |
| Aroclor-1260 (PCB-1260) | mg/L | ND | 0.000095 U | 0.000096 U |
| **Wet** | | | | |
| Ammonia | mg/L | 30 | 0.20 U | 0.20 U |
| Biochemical oxygen demand (BOD) | mg/L | 835 | 2.0 U | 2.0 U |
| Chemical oxygen demand (COD) | mg/L | 1670 | 10 U | 10 U |
| Oil and grease (HEM), polar | mg/L | 100 | 4.8 U | 4.8 U |
| pH, lab | s.u. | 6.5 to 11.0 | 7.9 HF | 7.5 HF |
| Phosphorus | mg/L | 13.8 | 0.10 U | 0.10 U |
| Total suspended solids (TSS) | mg/L | 1336 | 3.0 J | 4.0 U |

Notes:

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

# Table 4

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

| AOI: | | | Treatment System | Treatment System |
|---|---|---|---|---|
| Sample Location: | | | Influent | Influent |
| Sample ID: | | | GW-12610-053119-SSH-00519 | GW-12610A-082819-SSH-01119 |
| Sample Date: | | | 5/31/2019 | 8/28/2019 |
| **Parameters:** | **Units** | **Michigan Residential Drinking water criteria[1]** | | |
| **Polychlorinated Biphenyls** | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.000095 U | 0.000096 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.000095 U | 0.000096 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.000095 U | 0.000096 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | **0.0015** | 0.000096 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.000095 U | 0.000096 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.000095 U | 0.000096 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.000095 U | 0.000096 U |

Notes:

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

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|
| Sample Location: | | | MW102D1 | MW102D2 | MW102D4 | MW300S |
| Sample ID: | | | GW-12610A-082919-SSH-01219 | GW-12610A-082919-SSH-01319 | GW-12610A-082919-SSH-01419 | GW-12610A-082919-SSH-00919 |
| Sample Date: | | | 08/29/2019 | 08/29/2019 | 08/29/2019 | 08/29/2019 |
| **Parameters:** | **Units** | **Michigan Residential Drinking water criteria[(1)]** | | | | |
| **Polychlorinated Biphenyls** | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.000097 U | 0.000097 U | 0.000096 U | 0.000097 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.000097 U | 0.000097 U | 0.000096 U | 0.000097 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.000097 U | 0.000097 U | 0.000096 U | 0.000097 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00037 J | 0.00009 J | 0.000096 U | 0.00011 J |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.000097 U | 0.000097 U | 0.000096 U | 0.000097 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.000097 U | 0.000097 U | 0.000096 U | 0.000097 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.000097 U | 0.000097 U | 0.000096 U | 0.000097 U |

Notes:

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

**Table 5**

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

| AOI: | | | Machine Storage Area | Perimeter Banks | Perimeter Banks | Perimeter Banks |
|---|---|---|---|---|---|---|
| Sample Location: | | | MW300S | LMW13S | LMW15D | MW301D2 |
| Sample ID: | | | GW-12610A-082919-SSH-01019 | GW-12610A-082819-SSH-00719 | GW-12610A-082819-SSH-00819 | GW-12610A-082819-SSH-00619 |
| Sample Date: | | | 08/29/2019 | 08/28/2019 | 08/28/2019 | 08/28/2019 |
| | | | Duplicate | | | |
| Parameters: | Units | Michigan Residential Drinking water criteria[1] | | | | |
| **Polychlorinated Biphenyls** | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.000096 U | 0.000095 U | 0.000096 U | 0.000095 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.000096 U | 0.000095 U | 0.000096 U | 0.000095 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.000096 U | 0.000095 U | 0.000096 U | 0.000095 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.000096 J | **0.0011 J** | 0.000096 U | 0.000095 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.000096 U | 0.000095 U | 0.000096 U | 0.000095 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.000096 U | 0.000095 U | 0.000096 U | 0.000095 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.000096 U | 0.000095 U | 0.000096 U | 0.000095 U |

Notes:

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

**Table 6**

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

| | | Original Program (1) 2001 - 2010 | | | Revised 2011 - 2014 | | | Revised 2015-2016 | | | Revised 2017-2019 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Groundwater Quality Monitoring | | Static Water Level Monitoring (2) | Groundwater Quality Monitoring | | Static Water Level Monitoring (2) | Groundwater Quality Monitoring | | Static Water Level Monitoring (2) | Groundwater Quality Monitoring | | Static Water Level Monitoring (2) |
| **Plant Area** | **Location** | **Parameters** | **Frequency** | **Frequency** | **Parameters** | **Frequency** | **Frequency** | **Parameters** | **Frequency** | **Frequency** | **Parameters** | **Frequency** | **Frequency** |
| **Machine Storage Area (MSA)** | | | | | | | | | | | | | |
| MSA | LMW17S | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | LMW18S (4) | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | LMW19S | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | MW1S (4) | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | MW100S (4) | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | MW101S (4) | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | MW102D1 | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| MSA | MW102D2 | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| MSA | MW102D3 | PCBs | annually | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| MSA | MW102D4 | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| MSA | MW300S | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| MSA | LMW14S | -- | -- | annually | -- | -- | annually | -- | -- | annually | -- | -- | annually |
| **Perimeter Banks (PB)** | | | | | | | | | | | | | |
| PB | LMW13S | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| PB | LMW15D | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| PB | MW301D1 | PCBs | annually | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| PB | MW301D2 | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually | PCBs | annually | annually |
| PB | MW301D3 | PCBs | annually | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| PB | MW301D4 | PCBs | annually | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| **Crotty Street Channel (CSC)** | | | | | | | | | | | | | |
| CSC | MW1 | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| CSC | MW2 | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| CSC | MW3 | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| CSC | MW4 | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| CSC | MW5 | - - | - - | annually | - - | - - | annually | - - | - - | annually | - - | - - | annually |
| CSC | SG-1 (3) (7) | - - | - - | annually | - - | - - | annually | - - | - - | -- | - - | - - | -- |
| **Stormwater System(3)** | | | | | | | | | | | | | |
| MSA(5) | Extraction System | PCBs | Semi-annually | - - | PCBs | Semi-annually | - - | PCBs | Semi-annually | - - | - - | - - | - - |
| CSC(5) | Extraction System | PCBs | Semi-annually | - - | PCBs | Semi-annually | - - | PCBs | Semi-annually | - - | - - | - - | - - |
| CSC(5) | CB2 | PCBs | Semi-annually | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - |
| Treatment System | Influent | | | | | | | - - | - - | - - | PCBs | Semi-annually | - - |
| Treatment System | Effluent | | | | | | | (6) | Semi-annually | - - | (6) | Semi-annually | - - |

Notes:

(1) The program presented is a subset of the original program. Locations no longer included in this long-term groundwater and stormwater monitoring program are not presented.

(2) Static water level monitoring refers to independent monitoring program to evaluate containment. Static water level measurements will also be collected at all groundwater quality monitoring wells to evaluate groundwater flow directions.

(3) Staff gauge.

(4) Extraction system monitoring.

(5) To be sampled by company who maintains the extraction system.

(6) Sampling in accordance with the Industrial User Discharge Permit with the City of Bay City (120807). Parameters include: TSS, pH, grease/oil, phosphorous, COD, BOD, cadmium,

(7) SG-1 is damaged, and Saginaw River levels are now measured from SG-6, located at the General Motors Site.

# Attachment A

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

On-Site Personnel: Steve Hoevemeyer

Completed Date: 11/29/18

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: light snow, wind 5-10

Temperature: 30°F

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

- [X] Forcemain tubing requires replacement? as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.66 | N | Y | thick LNAPL |
| EW-8 | 11.34 | 9.37 | N | Y | LNAPL drops on probe |
| EW-12 | 9.42 | 7.36 | N | Y | thick LNAPL |
| EW-15 | 6.71 | 1.21 | 100% | 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 | 9.42 | 8.17 | 7.71 | 12.71 (LNAPL) | 3.03 | 1.39 |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| [X] Check piping for leaks | OK |
| [X] Check Bag filters | OK |
| [X] check GACs for leaks | none |
| [X] Check PLC | OK |
| [X] check aerator | OK |
| [X] check sludge pump | not working properly |
| [X] check inspection drum | iron bacteria |
| [X] check aeration tank | OK |
| [X] check settling chamber | iron bacteria scum |
| [X] check clear well | OK |
| [X] check floats in clearwell | |

| | Comments |
|---|---|
| [X] check feed pump | 100% |
| Flow Reading | 0.4 (gpm) |
| Totalized Flow Reading | 76,972 (gal) |
| [X] heater on? | yes |
| [X] check sludge tank | full of H2O |
| sludge thickness | 2-3 (in) |

**Collect Samples**

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

**Notes**

Crotty St water level is high

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 12/12/18

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: cloudy, wind 5-10

Temperature: low 30s

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

- [X] Forcemain tubing requires replacement? as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.63 | N | Y | thick LNAPL |
| EW-8 | 11.34 | 9.27 | N | Y | drops of LNAPL on probe |
| EW-12 | 9.42 | 6.99 | N | Y | thick LNAPL |
| EW-15 | 6.71 | 2.88 | ~~Y~~ 20% | Y | pump at 20% |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.38 | 8.10 | 7.57 | 12.58 LNAPL | 3.29 | 1.39 |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| [X] Check piping for leaks | OK |
| [X] Check Bag filters | OK |
| [X] check GACs for leaks | OK - none |
| [X] Check PLC | OK |
| [X] check aerator | OK |
| [X] check sludge pump | not working properly |
| [X] check inspection drum | iron bacteria |
| [X] check aeration tank | OK |
| [X] check settling chamber | iron bacteria scum |
| [X] check clear well | OK |
| [X] check floats in clearwell | floats not working properly |

| | Comments |
|---|---|
| [X] check feed pump | 100% |
| Flow Reading | 0.4 (gpm) |
| Totalized Flow Reading | 77,570 (gal) |
| [X] heater on? | Y |
| [X] check sludge tank | full of water |
| sludge thickness | 2-3 (in) |

Collect Samples

| | Date Initials Sample Numbe | Time |
|---|---|---|
| [ ] Sample Groundwater Treatment System Influent | W-12610- | |
| [X] Sample Groundwater Treatment System effluent | W-12610-121318-SSH-18112 | 0830 |

Notes

crotty St slip water level is high

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

On-Site Personnel: Steve Hoevemeyer

Completed Date: 1/29/19

Completed By: SH

**1. DETAILS OF INSPECTION**

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

Weather: mostly sun, snow 10"-12"

Temperature: 0°F, wind = 5-10 mph

**2. SITE INSPECTION**

| (Y/N) | | If yes indicate nature of maintenance/repairs required |
|---|---|---|
| N | Exposure Barrier (signs of trespassing, impairment of pavement) | |
| N | Multi-layer Cap (evidence of settlement, erosion, disturbance) | covered in 10"-12" snow |
| N | Containment System (signs of deterioration of sheet pile, leaking) | minor cracks at welds on cap |

**3. GROUNDWATER EXTRACTION SYSTEM**

- [N] Forcemain tubing requires replacement?

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.79 | N | Y | LNAPL |
| EW-8 | 11.34 | 9.28 | N | Y | |
| EW-12 | 9.42 | 7.37 | N | Y | LNAPL |
| EW-15 | 6.71 | 3.11 | N | 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 | 9.41 | 8.11 | 7.59 | 12.69 LNAPL | 3.49 | 1.73 |

**4. GROUNDWATER TREATMENT SYSTEM**

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

| | Comments |
|---|---|
| [X] check feed pump | |
| Flow Reading | (gpm) |
| Totalized Flow Reading | 77,720 (gal) |
| [X] heater on? | yes |
| [X] check sludge tank | |
| sludge thickness | 2-3 (in) |

**Collect Samples**

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

**Notes**

System not operating - trouble with floats in clearwell - on order

river level 587.16 - 6.43 = 580.73 (ice)

SH

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

On-Site Personnel: Steve Hoevemeyer

Completed Date: 2/28/19

Completed By: SH

**1. DETAILS OF INSPECTION**

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

Weather: sun wind ~5mph

Temperature: low 20s

**2. SITE INSPECTION**

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

**3. GROUNDWATER EXTRACTION SYSTEM**

- [N] Forcemain tubing requires replacement?

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.91 | N | Y | thick black LNAPL |
| EW-8 | 11.34 | 9.49 | N | Y | LNAPL drops on probe |
| EW-12 | 9.42 | 7.41 | N | Y | thick black LNAPL |
| EW-15 | 6.71 | 3.13 | N | 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 | 9.46 | 8.18 | 7.89 | 12.72 (LNAPL) | 3.57 | 2.83 |

**4. GROUNDWATER TREATMENT SYSTEM**

| | Comments |
|---|---|
| [✓] Check piping for leaks | none |
| [✓] Check Bag filters | |
| [✓] check GACs for leaks | none |
| [✓] Check PLC | |
| [✓] check aerator | |
| [✓] check sludge pump | |
| [✓] check inspection drum | |
| [ ] check aeration tank | |
| [✓] check settling chamber | iron bacteria |
| [✓] check clear well | note |
| [ ] check floats in clearwell | Note |

| | Comments |
|---|---|
| [✓] check feed pump | |
| Flow Reading | NA (gpm) |
| Totalized Flow Reading | 77,720 (gal) |
| [✓] heater on? | also space heater |
| [✓] check sludge tank | |
| sludge thickness | 2-3 (in) |

**Collect Samples**

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

**Notes**

install new floats in clearwell on 2/27 – system down – appears due to programming

clean screen in clearwell on 2/27

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

On-Site Personnel: Steve Hoevemeyer

Completed Date: 3/22/19

Completed By: SH

**1. DETAILS OF INSPECTION**

- [X] Routine Monthly Inspection
- [ ] Response to Alarm (list type and/or PLC outputs)
- [X] Other task: Ino-tek onsite & Nelson Electric (fix broken wire)

Weather: cloudy, wind ~10mph

Temperature: 30s

**2. SITE INSPECTION**

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

**3. GROUNDWATER EXTRACTION SYSTEM**

- [ ] 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 | 11.81 | N | Y | LNAPL |
| EW-8 | 11.34 | 9.28 | N | Y | drops of LNAPL on probe |
| EW-12 | 9.42 | 7.08 | N | Y | LNAPL |
| EW-15 | 6.71 | 2.39 | Y -20% | 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 | 9.38 | 8.03 | 7.56 | 12.81 (LNAPL) | 2.92 | 0.62 |

**4. GROUNDWATER TREATMENT SYSTEM**

| | Comments |
|---|---|
| ☑ Check piping for leaks | none |
| ☑ Check Bag filters | 1.5 psi |
| ☑ check GACs for leaks | none 1.0 psi |
| ☑ Check PLC | OK |
| ☑ check aerator | OK |
| ☑ check sludge pump | |
| ☑ check inspection drum | some Fe+ bacteria |
| ☑ check aeration tank | full |
| ☑ check settling chamber | Fe+ bacteria scum |
| ☑ check clear well | |
| ☑ check floats in clearwell | fixed |

| | Comments |
|---|---|
| ☑ check feed pump | 81,364 gals |
| Flow Reading | 0.9 (gpm) |
| Totalized Flow Reading | 0.9 MM (gal) |
| ☑ heater on? | yes |
| ☑ check sludge tank | full of $H_2O$ |
| sludge thickness | 1-3 (in) |

**Collect Samples**

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

**Notes**

river level 587.16 − 6.13 = 581.03

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 4/19/19

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: light rain windy

Temperature: high 40s

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

[N] Forcemain tubing requires replacement? as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.73 | off | N | |
| EW-8 | 11.34 | 9.22 | off | N | |
| EW-12 | 9.42 | 6.83 | off | N | LNAPL |
| EW-15 | 6.71 | in vault | | 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 | 9.34 | 8.16 | 7.37 | 12.69 (LNAPL) 1.79 | | in vault |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments | | Comments |
|---|---|---|---|
| [✓] Check piping for leaks | none | [X] check feed pump | 100% |
| [✓] Check Bag filters | OK | Flow Reading | 0.7 (gpm) |
| [✓] check GACs for leaks | none | Totalized Flow Reading | 105 745 (gal) |
| [✓] Check PLC | OK | [ ] heater on? | no |
| [✓] check aerator | OK | [X] check sludge tank | |
| [✓] check sludge pump | | sludge thickness | 2-3" (in) |
| [✓] check inspection drum | Fe+ bacteria | | |
| [✓] check aeration tank | | | |
| [✓] check settling chamber | | | |
| [✓] check clear well | | | |
| [✓] check floats in clearwell | OK | | |

**Collect Samples**

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

**Notes**

river level — 587.16 − 5.39 = 581.77

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

**Project: 12610**

On-Site Personnel: Steve Hoevemeyer

Completed Date: 5/17/19

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: cloudy; wind ≈ 5

Temperature: low 50s

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

Y Forcemain tubing requires replacement? as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.69 | N | N | LNAPL |
| EW-8 | 11.34 | 9.09 | N | N | drops of LNAPL on probe |
| EW-12 | 9.42 | 6.93 | N | N | LNAPL |
| EW-15 | 6.71 | 2.24 | Y - 27.5% | N | |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.33 | 7.99 | 6.96 | 12.59 (LNAPL) | 2.47 | water in vault |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| ☑ Check piping for leaks | none |
| ☑ Check Bag filters | |
| ☑ check GACs for leaks | none |
| ☑ Check PLC | |
| ☑ check aerator | |
| ☑ check sludge pump | needs O+M |
| ☑ check inspection drum | Fe+ bacteria on bottom |
| ☑ check aeration tank | |
| ☑ check settling chamber | Fe+ bacteria coated |
| ☑ check clear well | |
| ☑ check floats in clearwell | OK |

| | Comments |
|---|---|
| ☒ check feed pump | 100% |
| Flow Reading | 0.3 (gpm) |
| Totalized Flow Reading | 123482 (gal) |
| ☑ heater on? | ND |
| ☑ check sludge tank | |
| sludge thickness | 2-3 (in) |

**Collect Samples**

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

**Notes**

riverlevel - 587.16 - 5.71 = 581.45

SH

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

**Project: 12610**

On-Site Personnel: Steve Hoevemeyer

Completed Date: 6/24/19

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: light rain, wind 210

Temperature: mid 60's

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

N Forcemain tubing requires replacement? new tubing as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | | N | N | 11.28 LNAPL |
| EW-8 | 11.34 | 9.04 | N | N | LNAPL drops on probe |
| EW-12 | 9.42 | | N | N | 6.98 LNAPL |
| EW-15 | 6.71 | 1.71 | 23% | 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 | 9.30 | 7.81 | 6.44 | 12.47 LNAPL | 1.73 | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| ☑ Check piping for leaks | none |
| ☑ Check Bag filters | replaced |
| ☑ check GACs for leaks | none |
| ☑ Check PLC | OK |
| ☑ check aerator | OK |
| ☑ check sludge pump | |
| ☑ check inspection drum | |
| ☑ check aeration tank | |
| ☑ check settling chamber | |
| ☐ check clear well | |
| ☑ check floats in clearwell | |

| | Comments |
|---|---|
| ☑ check feed pump | new tubing |
| Flow Reading | 0.3 (gpm) |
| Totalized Flow Reading | 148,707 (gal) |
| ☑ heater on? | no |
| ☑ check sludge tank | |
| sludge thickness | 2-3 (in) |

**Collect Samples**

| | Date Initials Sample Numbe | Time |
|---|---|---|
| ☑ Sample Groundwater Treatment System Influent | W-12610-053119-SSH-00519 | 0930 |
| ☑ Sample Groundwater Treatment System effluent | W-12610-05319-SSH-00319 | 0905 |

**Notes**

SH

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 7/17/19

Completed By: SH SSH

## 1. DETAILS OF INSPECTION

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

Weather: mostly sun, 70s

Temperature: wind ≈ 15 mph

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

- [N] Forcemain tubing requires replacement? — pumps - replace tubing as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.17 | N | N | LNAPL |
| EW-8 | 11.34 | 9.11 | N | N | LNAPL drops on probe |
| EW-12 | 9.42 | 7.38 | N | N | LNAPL |
| EW-15 | 6.71 | 1.63 | Y-20% | N | |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.39 | 7.73 | 6.46 | 12.61 (LNAPL) | 2.06 | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| ☑ Check piping for leaks | |
| ☑ Check Bag filters | 3.0 psi |
| ☑ check GACs for leaks | 2.0 psi |
| ☑ Check PLC | OK |
| ☑ check aerator | OK |
| ☑ check sludge pump | |
| ☑ check inspection drum | Fe+ bacteria |
| ☑ check aeration tank | OK |
| ☑ check settling chamber | OK |
| ☑ check clear well | OK |
| ☑ check floats in clearwell | OK |

| | Comments |
|---|---|
| ☑ check feed pump | 100% |
| Flow Reading | 0.7 (gpm) |
| Totalized Flow Reading | 159,490 (gal) |
| ☐ heater on? | |
| ☑ check sludge tank | |
| sludge thickness | 2-3 (in) |
| ☒ outlet pressure | 0.5 psi |

**Collect Samples**

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

**Notes**

river 587.16 − 4.73 = 586.43

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

**Project: 12610**

On-Site Personnel: Steve Hoevemeyer

Completed Date: 8/28/19

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: mostly sun, wind 10-15

Temperature: 60s

## 2. SITE INSPECTION

If yes indicate nature of maintenance/repairs required

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

## 3. GROUNDWATER EXTRACTION SYSTEM

[N] Forcemain tubing requires replacement? replace pump tubing as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 10.99 | N | N | LNAPL |
| EW-8 | 11.34 | 9.19 | N | N | LNAPL drops on probe |
| EW-12 | 9.42 | 7.57 | N | N | LNAPL |
| EW-15 | 6.71 | 1.91 | 4-17.5% | N | |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.37 | 7.65 | 6.49 | 12.73 (LNAPL) | 2.22 | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| ☐ Check piping for leaks | |
| ☐ Check Bag filters | |
| ☐ check GACs for leaks | |
| ☐ Check PLC | |
| ☐ check aerator | |
| ☐ check sludge pump | |
| ☐ check inspection drum | |
| ☐ check aeration tank | |
| ☐ check settling chamber | |
| ☐ check clear well | |
| ☐ check floats in clearwell | |

| | Comments |
|---|---|
| ☒ check feed pump | 100% |
| Flow Reading | 0.4 (gpm) |
| Totalized Flow Reading | 168,508 (gal) |
| ☒ heater on? | No |
| ☒ check sludge tank | |
| sludge thickness | ≈2 (in) |

**Collect Samples**

| | Date Initials Sample Numbe | Time |
|---|---|---|
| ☒ Sample Groundwater Treatment System Influent No | W-12610-082819-SSH-01119 | 1430 |
| ☒ Sample Groundwater Treatment System effluent | W-12610- | |

**Notes**

river 587.16 - 5.56 = 586.60

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 9/30/19

Completed By: SH SSH

## 1. DETAILS OF INSPECTION

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

Weather: overcast, wind ~10

Temperature: low 60s

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

- [Y] Forcemain tubing requires replacement? as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 10.98 | N | N | LNAPL |
| EW-8 | 11.34 | 9.37 | N | N | |
| EW-12 | 9.42 | 7.31 | N | N | LNAPL |
| EW-15 | 6.71 | 1.47 | N | N | |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.39 | 7.75 | 6.71 | 12.69 | 2.16 | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| [X] Check piping for leaks | none |
| [X] Check Bag filters | ok |
| [X] check GACs for leaks | none |
| [X] Check PLC | ok |
| [X] check aerator | sounds "off" |
| [X] check sludge pump | |
| [X] check inspection drum | some foam on top |
| [X] check aeration tank | |
| [X] check settling chamber | |
| [X] check clear well | |
| [X] check floats in clearwell | ok |

| | Comments |
|---|---|
| [X] check feed pump | off |
| Flow Reading | (gpm) |
| Totalized Flow Reading | (gal) |
| [X] heater on? | NO |
| [X] check sludge tank | |
| sludge thickness | 2-3 (in) |

**Collect Samples**

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

**Notes**

river 587.16 - 5.73 = 581.43

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 10/29/19

Completed By: SH

## 1. DETAILS OF INSPECTION

- [x] Routine Monthly Inspection
- [x] Response to Alarm (list type and/or PLC outputs)
- [x] Other task: replace aerator; clean diffusers as soon as practicable

Weather: overcast, 50s

Temperature: wind ≈ 5-10 mph

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

N Forcemain tubing requires replacement? replace tubing at pumps as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 11.18 | N | Y | thick LNAPL |
| EW-8 | 11.34 | 9.21 | N | Y | brownish foam |
| EW-12 | 9.42 | 7.08 | N | Y | LNAPL |
| EW-15 | 6.71 | 1.03 | 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 | 9.35 | 7.75 | 6.76 | 12.62 (LNAPL) | 1.83 | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| ☑ Check piping for leaks | |
| ☑ Check Bag filters | |
| ☑ check GACs for leaks | |
| ☑ Check PLC | |
| ☑ check aerator | needs replacing |
| ☑ check sludge pump | |
| ☑ check inspection drum | |
| ☐ check aeration tank | |
| ☑ check settling chamber | |
| ☑ check clear well | |
| ☑ check floats in clearwell | |

| | Comments |
|---|---|
| ☐ check feed pump | off |
| Flow Reading | (gpm) |
| Totalized Flow Reading | 176,533 (gal) |
| ☑ heater on? | yes |
| ☐ check sludge tank | |
| sludge thickness | (in) |

Collect Samples

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

Notes

river 587.16' - 5.42' = 581.74'

# BAY CITY INDUSTRIAL LAND - MONTHLY SITE INSPECTION

Project: 12610

On-Site Personnel: Steve Hoevemeyer

Completed Date: 11/25/19

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: sun wind ~10

Temperature: mid 40s

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

[N] Forcemain tubing requires replacement? replace as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 10.96 | N | Y | LNAPL |
| EW-8 | 11.34 | 9.06 | N | Y | |
| EW-12 | 9.42 | 6.96 | N | Y | LNAPL |
| EW-15 | 6.71 | 1.71 | 4-17.5% | Y | |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.33 | 7.56 | 6.35 | 12.49 LNAPL | 1.88 | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| [X] Check piping for leaks | none |
| [X] Check Bag filters | 2 psi |
| [X] check GACs for leaks | none |
| [X] Check PLC | OK |
| [X] check aerator | replaced with new |
| [X] check sludge pump | not working properly |
| [X] check inspection drum | Iron bacteria |
| [X] check aeration tank | |
| [X] check settling chamber | |
| [X] check clear well | |
| [X] check floats in clearwell | |

| | Comments |
|---|---|
| [X] check feed pump | |
| Flow Reading | 0.5 (gpm) |
| Totalized Flow Reading | 192,582 (gal) |
| [X] heater on? | yes |
| [X] check sludge tank | |
| sludge thickness | 2-3 (in) |

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

**Notes**

replaced aerator, cleaned diffusers on 11/5

river 587.16 - 5.62 = 581.54

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

On-Site Personnel: Steve Hoevemeyer

Completed Date: 12/4/19

Completed By: SH

## 1. DETAILS OF INSPECTION

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

Weather: light snow, wind = 10

Temperature: low 30s

## 2. SITE INSPECTION

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

## 3. GROUNDWATER EXTRACTION SYSTEM

- [X] Forcemain tubing requires replacement? replace tubing and pumps as necessary

| EW (pump) | Target Depth (feet) | DTW (feet) | Pump Operating? (Y/N) What speed? | Heater On? (Y/N) | Comments (product evident, tubing replaced, iron bacteria) |
|---|---|---|---|---|---|
| EW-6 | 12.74 | 10.97/11.01 | N | Y | LNAPL/H2O |
| EW-8 | 11.34 | 9.03 | N | Y | LNAPL drops on probe |
| EW-12 | 9.42 | 6.61 | N | Y | LNAPL |
| EW-15 | 6.71 | flooded | Y - 17.5% | Y | |

| EW (no pump) | EW-7 | EW-9 | EW-10 | EW-11 | EW-13 | EW-14 |
|---|---|---|---|---|---|---|
| Target Depth | 11.00 | 11.04 | 10.77 | 14.51 | 7.33 | 5.42 |
| DTW | 9.29 | 7.57 | 6.30 | 12.43 | 2" bgs | flooded |

## 4. GROUNDWATER TREATMENT SYSTEM

| | Comments |
|---|---|
| [X] Check piping for leaks | none |
| [X] Check Bag filters | 3 psi |
| [X] check GACs for leaks | none |
| [X] Check PLC | OK |
| [X] check aerator | OK |
| [X] check sludge pump | not working properly |
| [X] check inspection drum | some iron bacteria |
| [X] check aeration tank | |
| [X] check settling chamber | |
| [X] check clear well | |
| [X] check floats in clearwell | |

| | Comments |
|---|---|
| [X] check feed pump | |
| Flow Reading | 0.4 (gpm) |
| Totalized Flow Reading | 199,399 (gal) |
| [X] heater on? | yes |
| [X] check sludge tank | some water |
| sludge thickness | 2-3 (in) |

**Collect Samples**

| | Date Initials Sample Numbe | Time |
|---|---|---|
| [ ] Sample Groundwater Treatment System Influent | W-12610- | |
| [X] Sample Groundwater Treatment System effluent | W-12610-120519-SSH-1519 | 0820 |

**Notes**

new pump in EW4

rise 587.16 - 5.71 = 581.45

Had EW15 at 20% - caused a high level alarm

# Attachment B

**Attachment B**

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

| **AOI:** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** | **effluent-GWTS** |
| **Sample ID:** | | | **W-12610-021214-SSH-1401** | **W-12610-022614-SSH-1403** | **W-12610-090514-SSH-1411** | **W-12610-031615-SSH-1501** | **W-12610-121015-SSH-1115** | **W-12610-050916-SSH-1601** | **W-12610-061416-SSH-1603** | **W-12610-011617-SSH-1701** | **WT-12610-050917-SSH-01-17** | **WT-12610-113017-SSH-02-17** | **W-12610-121318-SSH-18112** |
| **Sample Date:** | | | **2/12/2014** | **2/26/2014** | **9/5/2014** | **3/16/2015** | **12/10/2015** | **5/9/2016** | **6/14/2016** | **1/16/2017** | **5/9/2017** | **11/30/2017** | **12/13/2018** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | - | - | - | - | - | 0.00019 U | - | - | - | - | - |
| **Wet** | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | 33 | 4.4 | 2.0 U | 6.8 | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | 3.4 | - | 2.0 U | 2.2 | 2.0 U | 0.20 | 0.20 U |
| Biochemical oxygen demand (BOD) | mg/L | | 17 | 2.3 | 2.0 U | 2.3 | 9.3 | - | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Chemical oxygen demand (COD) | mg/L | | 20 U | 10 U | 10 U | 10 U | 10 U | - | 18 | 24 | 21 | 13 | 10 U |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | 4.8 U | 1.7 JB | 4.9 U | 4.7 U | 4.8 U | - | 4.7 U | 4.7 U | 1.2 J | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | 4.7 U | 4.8 U |
| pH, lab | s.u. | 6.5 - 8.5 | 8.00 HF | 8.09 HF | 7.98 HF | 7.69 HF | 7.75 HF | - | 7.54 HF | 7.7 HF | 7.9 HF | 7.2 HF | 7.9 HF |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | 0.22 | 0.20 | 0.10 U | 0.10 U | 0.10 U | - | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | 4.0 U | 4.0 | 4.0 U | 4.0 U | 4.0 U | - | 4.0 U | 4.0 U | 4.0 U | 4.0 U | 3.0 J |
| **FPARAM** | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **effluent-GWTS** | **influent-GWTS** | **influent-GWTS** | **influent-GWTS** | **influent-GWTS** | **influent-GWTS** | **influent-GWTS** | **influent-GWTS** | **Crotty Street Channel CB-2** | **Crotty Street Channel CB-2** | **Crotty Street Channel CB-2** | **Crotty Street Channel CB-2** |
| **Sample ID:** | | | **W-12610-053119-SSH-00319** | **W-12610-022614-SSH-1402** | **GW-12610-082117-SSH-08-17** | **W-12610-043018-SSH-0118** | **W-12610-060118-SSH-18101** | **W-12610-060118-SSH-18102** | **GW-12610A-082018-SSH-18109** | **W-12610-082819-SSH-01119** | **W-040506-SSH-CB04** | **W-031307-SSH-CB07-4** | **CB2_8/27/07** | **CB2-(06/11/08)** |
| **Sample Date:** | | | **5/31/2019** | **2/26/2014** | **8/21/2017** | **4/30/2018** | **6/1/2018** | **6/1/2018 (Duplicate)** | **8/20/2018** | **8/28/2019** | **4/5/2006** | **3/13/2007** | **8/27/2007** | **6/11/2008** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | - | - | 0.0019 U | 0.0002 U | - | - | 0.00095 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | - | - | 0.0019 U | 0.0002 U | - | - | 0.00095 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | - | - | 0.0019 U | 0.0002 U | - | - | 0.00095 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | - | - | **0.0054** | **0.0013** | - | - | **0.0025** | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | - | - | 0.0019 U | 0.0002 U | - | - | 0.00095 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | - | - | 0.0019 U | 0.0002 U | - | - | 0.00095 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | - | - | 0.0019 U | 0.0002 U | - | - | 0.00095 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | 6.7 | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | 0.20 U | - | - | - | 0.30 | 0.28 | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | 2.0 U | - | - | - | 2.0 U | 2.0 U | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | 10 U | - | - | - | 10 U | 10 U | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | 4.8 U | - | - | - | 4.8 U | 4.9 U | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | 7.5 HF | - | - | - | 7.6 | 7.6 | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | 0.10 U | - | - | - | 0.10 U | 0.10 U | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | 4.0 U | - | - | - | 4.0 U | 4.0 U | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CB-2** | **CSA GW Ext. Sys. Discharg** | **CSA GW Ext. Sys. Discharg** |
| **Sample ID:** | | | **CB2_(08/19/08)** | **CB-2_(03/12/09)** | **W-12610-032410-SSH-CB10-1** | **W-12610-040611-SSH-11103** | **W-12610-040611-SSH-11104** | **W-12610-102511-SSH-027** | **W-12610-041712-SSH-SA1202** | **GW-12610-080712-SSH-001** | **W-12610-040913-SSH-CB1213** | **W-12610-122914-SSH-1421** | **W-040506-SSH-C03** | **GW-081606-SSH-0601** |
| **Sample Date:** | | | **8/19/2008** | **3/12/2009** | **3/24/2010** | **4/6/2011** | **4/6/2011 (Duplicate)** | **10/25/2011** | **4/17/2012** | **8/7/2012** | **4/9/2013** | **12/29/2014** | **4/5/2006** | **8/16/2006** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00036 | 0.00047 |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.000095 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | 200 B | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | 0.069 J | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | 2.0 U | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | 20 | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | 220 | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | 1.1 J | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | 7.39 HF | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | 0.10 U | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | 260 | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | 9.4 | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | 4.0 U | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharg | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharg |
| **Sample ID:** | | | W-031307-SSH-C07-3 | CSC | CSC-(06/11/08) | DUP-(06/11/08) | CSC_(08/19/08) | CSC_(03/12/09) | CSC | W-12610-043010-SSH-CSC-4 | GW-12610-081910-SSH-026 | GW-12610-081910-SSH-027 | W-12610-040611-SSH-11102 | GW-12610-082211-JY-002 |
| **Sample Date:** | | | 3/13/2007 | 8/23/2007 | 6/11/2008 | 6/11/2008 (Duplicate) | 8/19/2008 | 3/12/2009 | 8/27/2009 | 4/30/2010 | 8/19/2010 | 8/19/2010 (Duplicate) | 4/6/2011 | 8/22/2011 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00023 J | **0.00051** | 0.000074 J | 0.000077 J | 0.00038 | 0.00014 J | **0.00075** | **0.00059 J** | **0.00062** | **0.00063** | 0.0002 U | **0.00096** |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.000044 J |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Crotty Street Channel | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location: | | | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | CSA GW Ext. Sys. Discharge | EW14 | EW6 | EW7 |
| Sample ID: | | | W-12610-041712-SSH-SA1201 | GW-12610-080712-SSH-002 | GW-12610-080514-SSH-1402 | W-12610-122914-SSH-1420 | W-12610-040915-SSH-1502 | GW-12610-082515-SSH-0115 | W-12610-050916-SSH-1602 | W-12610-082516-SSH-1606 | GW-12610-071811-SH-004 | GW-12610-072011-SH-016 | GW-12610-071811-SH-001(C) |
| Sample Date: | | | 4/17/2012 | 8/7/2012 | 8/5/2014 | 12/29/2014 | 4/9/2015 | 8/25/2015 | 5/9/2016 | 8/25/2016 | 7/18/2011 | 7/20/2011 | 7/18/2011 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.000097 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | - | - |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.000097 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | - | - |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.000097 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | - | - |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | **0.00062** | **0.00086** | **0.00068 J** | 0.00022 | 0.00019 U | **0.00056** | 0.00019 | 0.00019 U | **0.00054** | - | - |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.000097 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | - | - |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.000097 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | R | 0.00019 U | - | - |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.000097 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | R | 0.00019 U | - | - |
| **Wet** | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | 570 | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | **12** | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | 2.0 UJ | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | 85 | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | 550 | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | 1.4 J | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | 6.88 J | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | 0.14 | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | **690** | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | 105 | 4240 | 9400 |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | 31 | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | 99 | - | - |
| **FPARAM** | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | 0.17 | 4.57 | 6.19 |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | 6.69 | 8.30 | 8.07 |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | 19.75 | 18.05 | 19.74 |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | 18.4 | 66.9 | 50.8 |

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

**Attachment B**

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **EW8** | **EW9** | **EW10** | **EW11** | **EW12** | **MSA GW Ext. Sys. Discharg** | **MSA GW Ext. Sys. Discharg** | **MSA GW Ext. Sys. Discharg** | **MSA GW Ext. Sys. Discharg** | **MSA GW Ext. Sys. Discharg** | **MSA GW Ext. Sys. Discharg** | **MSA GW Ext. Sys. Discharg** |
| **Sample ID:** | | | **GW-12610-071911-SH-009C** | **GW-12610-071811-SH-002(C)** | **GW-12610-072011-SH-017** | **GW-12610-071911-SH-008C** | **GW-12610-072011-SH-015** | **W-040506-SSH-M02** | **GW-081606-SSH-0602** | **W-031307-SSH-M07-2** | **MSA** | **MSA-(06/11/08)** | **MSA_(08/19/08)** | **DUP_(03/12/09)** |
| **Sample Date:** | | | **7/19/2011** | **7/18/2011** | **7/20/2011** | **7/19/2011** | **7/20/2011** | **4/5/2006** | **8/16/2006** | **3/13/2007** | **8/23/2007** | **6/11/2008** | **8/19/2008** | **3/12/2009 (Duplicate)** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | - | - | - | - | - | 0.0002 U | 0.0002 U | 0.001 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | - | - | - | - | - | 0.0002 U | 0.0002 U | 0.001 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | - | - | - | - | - | 0.0002 U | 0.0002 U | 0.001 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | - | - | - | - | - | 0.0002 U | **0.00062** | 0.001 U | 0.0002 U | 0.0002 U | 0.00025 | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | - | - | - | - | - | 0.0002 | 0.0002 U | 0.001 U | 0.0003 | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | - | - | - | - | - | 0.0002 U | 0.0002 U | 0.001 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | - | - | - | - | - | 0.00018 J | 0.00024 | 0.001 U | 0.00026 | 0.0002 U | 0.00028 | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | 1920 | 9360 | 19800 | 7140 | 3800 | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | 0.12 | 0.18 | 0.33 | - | 0.07 | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | 6.90 | 6.69 | 6.63 | - | 6.94 | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | 18.45 | 17.89 | 14.02 | - | 17.13 | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | 34.1 | 12.0 | 49.3 | - | 113 | - | - | - | - | - | - | - |

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

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

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

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

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

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

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

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location: | | | MW102D1 | MW102D1 | MW102D1 | MW102D1 | MW102D1 | MW102D1 | MW102D1 | MW102D2 | MW102D2 | MW102D2 | MW102D2 | MW102D2 |
| Sample ID: | | | GW-12610-082615-SSH-0715 | GW-12610-082615-SSH-0815 | GW-12610-082716-SSH-1613 | GW-12610-082716-SSH-1614 | GW-12610-082117-SSH-02-17 | GW-12610A-082118-SSH-18111 | GW-12610-082919-SSH-01219 | GW-081606-SSH-0606 | MW102D2 | MW102D2_(08/19/08) | MW102D2 | GW-12610-081710-JY-002 |
| Sample Date: | | | 8/26/2015 | 8/26/2015 (Duplicate) | 8/27/2016 | 8/27/2016 (Duplicate) | 8/21/2017 | 8/21/2018 | 8/29/2019 | 8/16/2006 | 8/21/2007 | 8/19/2008 | 8/26/2009 | 8/17/2010 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00034 | 0.00034 | 0.00019 U | 0.00019 U | 0.00026 | 0.00032 | 0.00037 J | 0.0002 U | 0.0002 U | 0.0002 U | 0.000073 J | 0.00013 J |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D2** | **MW102D3** | **MW102D3** | **MW102D3** |
| **Sample ID:** | | | **GW-12610-082311-JY-011** | **GW-12610-080912-SSH-011** | **GW-12610-080713-JY-005** | **GW-12610-080614-SSH-1404** | **GW-12610-082615-SSH-0915** | **GW-12610-082616-SSH-1612** | **GW-12610-082117-SSH-03-17** | **GW-12610A-082118-SSH-18110** | **GW-12610-082919-SSH-01319** | **GW-081606-SSH-0607** | **MW102D3** | **MW102D3_(08/19/08)** |
| **Sample Date:** | | | **8/23/2011** | **8/9/2012** | **8/7/2013** | **8/6/2014** | **8/26/2015** | **8/26/2016** | **8/21/2017** | **8/21/2018** | **8/29/2019** | **8/16/2006** | **8/21/2007** | **8/19/2008** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.0002 U | 0.00019 U | 0.00019 U | 0.00013 J | 0.00019 U | 0.00015 J | 0.00048 | 0.00019 U | 0.00009 J | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.00013 J | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000045 J | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.000097 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

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

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

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

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location: | | | MW102D4 | MW102D4 | MW102D4 | MW102D4 | MW102D4 | MW102D4 | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S |
| Sample ID: | | | GW-12610-082615-SSH-1015 | GW-12610-082616-SSH-1611 | GW-12610-082117-SSH-04-17 | GW-12610-082117-SSH-05-17 | GW-12610A-082018-SSH-18108 | GW-12610-082919-SSH-01419 | GW-081706-SSH-0608 | GW-081706-SSH-0609 | MW300S | MW300S_(08/19/08) | DUP 4 | MW300S |
| Sample Date: | | | 8/26/2015 | 8/26/2016 | 8/21/2017 | 8/21/2017 (Duplicate) | 8/20/2018 | 8/29/2019 | 8/17/2006 | 8/17/2006 (Duplicate) | 8/21/2007 | 8/19/2008 | 8/26/2009 (Duplicate) | 8/26/2009 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 UJ |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 UJ |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 UJ |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.000078 J | 0.00019 U | 0.000096 U | 0.00011 J | 0.000095 J | 0.00024 | 0.00021 | 0.0004 J | 0.00039 J |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 UJ |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 UJ |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 UJ |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location: | | | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S | MW300S |
| Sample ID: | | | GW-12610-081810-JY-011 | GW-12610-081810-JY-012 | GW-12610-071911-SH-014 | GW-12610-082311-JY-004 | GW-12610-082311-JY-005 | GW-12610-080912-SSH-007 | GW-12610-080912-SSH-008 | GW-12610-080713-JY-001 | GW-12610-080713-JY-002 | GW-12610-080614-SSH-1407 | GW-12610-082615-SSH-0615 | GW-12610-082616-SSH-1610 |
| Sample Date: | | | 8/18/2010 | 8/18/2010 (Duplicate) | 7/19/2011 | 8/23/2011 | 8/23/2011 (Duplicate) | 8/9/2012 | 8/9/2012 (Duplicate) | 8/7/2013 | 8/7/2013 (Duplicate) | 8/6/2014 | 8/26/2015 | 8/26/2016 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | - | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | - | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | - | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00014 J | 0.00016 J | - | 0.00023 | 0.00024 | 0.00019 U | 0.000083 J | 0.00019 U | 0.00019 U | 0.0001 J | 0.000095 J | 0.00019 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | - | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | - | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | R | R | 0.00019 U | 0.00019 U | R |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | - | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | R | R | 0.00019 U | 0.00019 U | R |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | 2960 | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | 0.14 | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | 7.28 | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | 16.78 | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | 4.92 | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Machine Storage Area | Machine Storage Area | Machine Storage Area | Machine Storage Area | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | MW300S | MW300S | MW300S | MW300S | LMW13S | LMW13S | LMW13S | LMW13S | LMW13S | LMW13S | LMW13S | LMW13S |
| **Sample ID:** | | | GW-12610-082117-SSH-07-17 | GW-12610A-082018-SSH-18107 | GW-12610-082819-SSH-00919 | GW-12610-082819-SSH-01019 | GW-081706-SSH-0610 | LMW13S | LMW13S_(08/18/08) | GW-12610-081710-JY-009 | GW-12610-082311-JY-006 | GW-12610-080812-SSH-004 | GW-12610-080812-SSH-005 | GW-12610-080813-JY-008 |
| **Sample Date:** | | | 8/21/2017 | 8/20/2018 | 8/28/2019 | 8/28/2019 | 8/17/2006 | 8/21/2007 | 8/18/2008 | 8/17/2010 | 8/23/2011 | 8/8/2012 | 8/8/2012 (Duplicate) | 8/8/2013 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000097 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 UJ |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000097 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 UJ |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000097 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 UJ |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.000084 J | 0.00019 U | 0.00011 J | 0.000096 J | 0.0002 U | **0.001** | 0.0002 U | 0.0002 U | **0.00072** | **0.00079** | **0.00085** | 0.00019 UJ |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000097 U | 0.000096 U | **0.0012** | 0.0002 U | **0.0016** | **0.0011** | 0.00019 U | 0.00019 U | 0.00019 U | **0.001 J** |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000097 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000097 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **LMW13S** | **LMW13S** | **LMW13S** | **LMW13S** | **LMW13S** | **LMW13S** | **LMW15D** | **LMW15D** | **LMW15D** | **LMW15D** | **LMW15D** | **LMW15D** |
| **Sample ID:** | | | **GW-12610-080614-SSH-1408** | **GW-12610-082615-SSH-0315** | **GW-12610-082616-SSH-1609** | **GW-12610-082217-SSH-09-17** | **GW-12610A-082018-SSH-18103** | **GW-12610-082819-SSH-00719** | **GW-081706-SSH-0611** | **LMW15D** | **LMW15D_(08/18/08)** | **MW15D** | **GW-12610-081710-JY-010** | **GW-12610-082311-JY-007** |
| **Sample Date:** | | | **8/6/2014** | **8/26/2015** | **8/26/2016** | **8/22/2017** | **8/20/2018** | **8/28/2019** | **8/17/2006** | **8/21/2007** | **8/18/2008** | **8/26/2009** | **8/17/2010** | **8/23/2011** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | **0.00057** | **0.00056** | **0.0011 J** | 0.0002 U | 0.0002 U | 0.00019 J | 0.000073 J | 0.0002 U | 0.00006 J |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | **0.001** | **0.00098** | **0.00058** | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

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

| AOI: | | | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | LMW15D | LMW15D | LMW15D | LMW15D | LMW15D | LMW15D | LMW15D | LMW15D | LMW15D | MW301D1 | MW301D1 | MW301D1 |
| **Sample ID:** | | | GW-12610-080812-SSH-006 | GW-12610-080813-JY-009 | GW-12610-080614-SSH-1409 | GW-12610-082615-SSH-0415 | GW-12610-082616-SSH-1608 | GW-12610-082217-SSH-10-17 | GW-12610A-082018-SSH-18104 | GW-12610A-082018-SSH-18105 | GW-12610-082819-SSH-00819 | GW-081706-SSH-0612 | MW301D1 | MW301D1_(08/19/08) |
| **Sample Date:** | | | 8/8/2012 | 8/8/2013 | 8/6/2014 | 8/26/2015 | 8/26/2016 | 8/22/2017 | 8/20/2018 | 8/20/2018 (Duplicate) | 8/28/2019 | 8/17/2006 | 8/21/2007 | 8/19/2008 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00013 J | 0.00014 J | 0.000065 J | 0.00019 U | 0.00019 U | 0.00019 U | 0.00021 | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.00019 U | 0.00019 UJ | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.00019 U | 0.00019 UJ | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.000096 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - |

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

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

| AOI: | | | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | MW301D1 | MW301D1 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 | MW301D2 |
| **Sample ID:** | | | MW301D1 | GW-12610-081710-JY-005 | GW-081706-SSH-0615 | MW301D2 | MW301D2_(08/19/08) | MW301D2 | GW-12610-081710-JY-006 | GW-12610-082311-JY-008 | GW-12610-080912-SSH-009 | GW-12610-080713-JY-007 | GW-12610-080614-SSH-1410 | GW-12610-082615-SSH-0515 | GW-12610-121416-SSH-1615 |
| **Sample Date:** | | | 8/26/2009 | 8/17/2010 | 8/17/2006 | 8/21/2007 | 8/19/2008 | 8/26/2009 | 8/17/2010 | 8/23/2011 | 8/9/2012 | 8/7/2013 | 8/6/2014 | 8/26/2015 | 12/14/2016 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.000085 J | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00019 U | 0.00038 U | 0.00019 U |
| **Wet** | | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks | Perimeter Banks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | MW301D2 | MW301D2 | MW301D2 | MW301D3 | MW301D3 | MW301D3 | MW301D3 | MW301D3 | MW301D4 | MW301D4 | MW301D4 | MW301D4 | MW301D4 | MW301D4 |
| **Sample ID:** | | | GW-12610-082117-SSH-06-17 | GW-12610A-082018-SSH-18106 | GW-12610-082819-SSH-00619 | GW-081706-SSH-0614 | MW301D3 | MW301D3_(08/19/08) | MW301D3 | GW-12610-081710-JY-007 | GW-081706-SSH-0613 | MW301D4 | DUP3_(08/19/08) | MW301D4_(08/19/08) | MW301D4 | GW-12610-081710-JY-008 |
| **Sample Date:** | | | 8/21/2017 | 8/20/2018 | 8/28/2019 | 8/17/2006 | 8/21/2007 | 8/19/2008 | 8/26/2009 | 8/17/2010 | 8/17/2006 | 8/21/2007 | 8/19/2008 (Duplicate) | 8/19/2008 | 8/26/2009 | 8/17/2010 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00012 J | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.00019 U | 0.00019 U | 0.000095 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

**Attachment B**

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

| AOI: | | | Perimeter Banks | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | MW301D4 | MW10S | MW10S | MW10S | MW10S | MW10S | MW10S | MW501D | MW501D | MW501D | MW501D | MW501D | MW501D | MW501D | MW501S |
| **Sample ID:** | | | GW-12610-082311-JY-009 | GW-082106-SSH-0640 | MW10S | MW10S_(08/20/08) | MW10S | GW-12610-083010-SSH-038 | GW-12610-082411-JY-016 | GW-082106-SSH-0641 | MW501D | MW501D_(08/20/08) | MW501D | GW-12610-083110-SSH-043 | GW-12610-082411-JY-018 | GW-082106-SSH-0637 | |
| **Sample Date:** | | | 8/23/2011 | 8/21/2006 | 8/23/2007 | 8/20/2008 | 8/25/2009 | 8/30/2010 | 8/24/2011 | 8/21/2006 | 8/22/2007 | 8/20/2008 | 8/25/2009 | 8/31/2010 | 8/24/2011 | 8/21/2006 | |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0004 U | 0.001 U | 0.001 U | 0.00039 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0004 U | 0.001 U | 0.001 U | 0.00039 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0004 U | 0.001 U | 0.001 U | 0.00039 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.0002 U | **0.0031** | **0.0014** | **0.0013 J** | **0.0033** | **0.0037** | 0.00039 U | 0.0002 U | 0.0002 U | 0.00015 J | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0004 U | 0.001 U | 0.001 U | 0.00039 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0004 U | 0.001 U | 0.001 U | 0.00039 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0004 U | 0.001 U | 0.001 U | 0.00039 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | |
| **Wet** | | | | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **FPARAM** | | | | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

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

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

| AOI: | | | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location: | | | MW501S | MW501S | MW501S | MW501S | MW502D | MW502D | MW502D | MW502D | MW502D | MW502D | MW502D | MW503D | MW503D | MW503D | MW503D |
| Sample ID: | | | MW501S | MW501S_(08/20/08) | MW501S | GW-12610-083110-SSH-042 | GW-082106-SSH-0638 | GW-082106-SSH-0639 | MW502D | MW502D | MW502D_(08/19/08) | MW502D | GW-12610-083010-SSH-039 | GW-12610-082411-JY-015 | GW-081806-SSH-0629 | DUP3 | MW503D | MW503D | MW503D_(08/19/08) |
| Sample Date: | | | 8/22/2007 | 8/20/2008 | 8/25/2009 | 8/31/2010 | 8/21/2006 | 8/21/2006 (Duplicate) | 8/22/2007 | 8/25/2009 | 8/19/2008 | 8/25/2009 | 8/30/2010 | 8/24/2011 | 8/18/2006 | 8/21/2007 (Duplicate) | 8/21/2007 | 8/19/2008 |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.000084 J | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.001 U | 0.0002 U | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

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

| AOI: | | | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area | Undeveloped Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Location:** | | | **MW503D** | **MW503D** | **MW503S** | **MW503S** | **MW503S** | **MW503S** | **MW503S** | **MW504S** | **MW504S** | **MW504S** | **MW504S** | **MW504S** | **MW504S** | **MW506S** | **MW506S** |
| **Sample ID:** | | | **MW503D** | **GW-12610-083010-SSH-037** | **GW-081806-SSH-0628** | **MW503S** | **MW503S_(08/19/08)** | **MW503S** | **GW-12610-083010-SSH-036** | **GW-082106-SSH-0642** | **MW504S** | **MW504S_(08/20/08)** | **MW504S** | **GW-12610-083110-SSH-041** | **GW-12610-082411-JY-017** | **GW-081806-SSH-0627** | **DUP4** |
| **Sample Date:** | | | **8/26/2009** | **8/30/2010** | **8/18/2006** | **8/21/2007** | **8/19/2008** | **8/26/2009** | **8/30/2010** | **8/21/2006** | **8/22/2007** | **8/20/2008** | **8/25/2009** | **8/31/2010** | **8/24/2011** | **8/18/2006** | **8/22/2007 (Duplicate)** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.000087 J | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.000065 J | 0.00015 J | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U | 0.00019 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | | | | | | | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **FPARAM** | | | | | | | | | | | | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

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

| **AOI:** | | | **Undeveloped Area** | **Undeveloped Area** | **Undeveloped Area** | **Undeveloped Area** |
|---|---|---|---|---|---|---|
| **Sample Location:** | | | **MW506S** | **MW506S** | **MW506S** | **MW506S** |
| **Sample ID:** | | | **MW506S** | **MW506S_(08/20/08)** | **MW506S** | **GW-12610-083010-SSH-040** |
| **Sample Date:** | | | **8/22/2007** | **8/20/2008** | **8/27/2009** | **8/30/2010** |
| **Parameters** | **Units** | **Michigan Residential Drinking water criteria** | | | | |
| **PCBs** | | | | | | |
| Aroclor-1016 (PCB-1016) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1221 (PCB-1221) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1232 (PCB-1232) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1242 (PCB-1242) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1248 (PCB-1248) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1254 (PCB-1254) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| Aroclor-1260 (PCB-1260) | mg/L | 0.0005 | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 U |
| **Wet** | | | | | | |
| Alkalinity, total (as CaCO3) | mg/L | | - | - | - | - |
| Ammonia | mg/L | 10 | - | - | - | - |
| Ammonia-N | mg/L | | - | - | - | - |
| Biochemical oxygen demand (BOD) | mg/L | | - | - | - | - |
| Chemical oxygen demand (COD) | mg/L | | - | - | - | - |
| Hardness, carbonate | mg/L | | - | - | - | - |
| Oil and grease (HEM), polar | mg/L | | - | - | - | - |
| Oil and grease (HEM), total | mg/L | | - | - | - | - |
| pH, lab | s.u. | 6.5 - 8.5 | - | - | - | - |
| Phosphate, total | mg/L | | - | - | - | - |
| Phosphorus | mg/L | 63 | - | - | - | - |
| Total dissolved solids (TDS) | mg/L | 500 | - | - | - | - |
| Total microbial population | cfu/mL | | - | - | - | - |
| Total organic carbon (TOC) | mg/L | | - | - | - | - |
| Total suspended solids (TSS) | mg/L | | - | - | - | - |
| **FPARAM** | | | | | | |
| Dissolved oxygen (DO), field | mg/L | | - | - | - | - |
| pH, field | s.u. | 6.5 - 8.5 | - | - | - | - |
| Temperature, field | Deg C | | - | - | - | - |
| Turbidity, field | NTU | | - | - | - | - |

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

# Attachment C

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: 240-105752-1
Client Project/Site: 12610A-T04, RACER Bay City

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

Attn: Ms. Ruth Mickle

Denise D Heckler

*Authorized for release by:*
*12/31/2018 6:34:48 PM*

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



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

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

# Table of Contents

# Case Narrative

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

TestAmerica Job ID: 240-105752-1

## Job ID: 240-105752-1

### Laboratory: TestAmerica Canton

**Narrative**

**Job Narrative**
**240-105752-1**

**Comments**
No additional comments.

**Receipt**
The sample was received on 12/14/2018 8:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

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

**GC Semi VOA**
Method(s) 608: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: W-12610-121318-SSH-18112 (240-105752-1). 3958684, 3800132, 3869666.

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

**Metals**
Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: W-12610-121318-SSH-18112 (240-105752-1). The continuing calibration blanks and method blanks may not support the lower PQL.

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

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

**Organic Prep**
Method(s) 3520C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-360348.

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

## Qualifiers

### GC/MS VOA

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

### GC Semi VOA

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

### Metals

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

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |
| U | Indicates the analyte was analyzed for but not detected. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| s | Seeded Control Blank (SCB) Recovery Low |

## Glossary

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

# Sample Summary

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

TestAmerica Job ID: 240-105752-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Water | 12/13/18 08:30 | 12/14/18 08:00 |

# Detection Summary

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

TestAmerica Job ID: 240-105752-1

## Client Sample ID: W-12610-121318-SSH-18112 — Lab Sample ID: 240-105752-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 70 | J | 100 | 26 | ug/L | 1 | | 200.7 Rev 4.4 | Total Recoverable |
| Nickel | 2.9 | J | 20 | 2.2 | ug/L | 1 | | 200.7 Rev 4.4 | Total Recoverable |
| pH | 7.9 | HF | 0.1 | 0.1 | SU | 1 | | 4500 H+ B-2000 | Total/NA |
| Total Suspended Solids | 3.0 | J | 4.0 | 2.2 | mg/L | 1 | | SM 2540D | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

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

TestAmerica Job ID: 240-105752-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 624 | Volatile Organic Compounds (GC/MS) | 40CFR136A | TAL CAN |
| 608 | Polychlorinated Biphenyls (PCBs) (GC) | 40CFR136A | TAL CAN |
| 200.7 Rev 4.4 | Metals (ICP) | EPA | TAL CAN |
| 245.1 | Mercury (CVAA) | EPA | TAL CAN |
| 1664A | HEM and SGT-HEM | 1664A | TAL CAN |
| 410.4 | COD | MCAWW | TAL CAN |
| 4500 H+ B-2000 | pH | SM | TAL CAN |
| 4500 NH3 D-2011 | Ammonia | SM | TAL CAN |
| 5210B-2001 | BOD, 5-Day | SM | TAL CAN |
| SM 2540D | Solids, Total Suspended (TSS) | SM | TAL CAN |
| SM4500 P E-1999 | Phosphorus | SM | TAL CAN |
| 200.7 | Preparation, Total Recoverable Metals | EPA | TAL CAN |
| 245.1 | Preparation, Mercury | EPA | TAL CAN |
| 608 | Liquid-Liquid Extraction (Continuous) | 40CFR136A | TAL CAN |

**Protocol References:**

1664A = EPA-821-98-002

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

EPA = US Environmental Protection Agency

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

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

**Laboratory References:**

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

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

TestAmerica Job ID: 240-105752-1

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

**Client Sample ID: W-12610-121318-SSH-18112**
**Date Collected: 12/13/18 08:30**
**Date Received: 12/14/18 08:00**

**Lab Sample ID: 240-105752-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 1.0 | U | 1.0 | 0.040 | ug/L | | | 12/19/18 00:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *69 - 120* | | *12/19/18 00:34* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *61 - 138* | | *12/19/18 00:34* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *73 - 120* | | *12/19/18 00:34* | *1* |

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

TestAmerica Job ID: 240-105752-1

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

**Client Sample ID: W-12610-121318-SSH-18112**
**Date Collected: 12/13/18 08:30**
**Date Received: 12/14/18 08:00**

**Lab Sample ID: 240-105752-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 12/17/18 11:32 | 12/19/18 13:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *22* | | *10 - 114* | *12/17/18 11:32* | *12/19/18 13:31* | *1* |
| *Tetrachloro-m-xylene* | *36* | | *15 - 131* | *12/17/18 11:32* | *12/19/18 13:31* | *1* |

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

TestAmerica Job ID: 240-105752-1

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

**Client Sample ID: W-12610-121318-SSH-18112**
**Date Collected: 12/13/18 08:30**
**Date Received: 12/14/18 08:00**

**Lab Sample ID: 240-105752-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 5.0 | U | 5.0 | 0.62 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |
| Cadmium | 2.0 | U | 2.0 | 0.20 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |
| Chromium | 5.0 | U | 5.0 | 0.63 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |
| Copper | 20 | U | 20 | 3.5 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |
| **Iron** | **70** | **J** | 100 | 26 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |
| **Nickel** | **2.9** | **J** | 20 | 2.2 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |
| Lead | 3.0 | U | 3.0 | 2.8 | ug/L | | 12/18/18 14:00 | 12/19/18 17:38 | 1 |

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

TestAmerica Job ID: 240-105752-1

## Method: 245.1 - Mercury (CVAA)

**Client Sample ID: W-12610-121318-SSH-18112**
**Date Collected: 12/13/18 08:30**
**Date Received: 12/14/18 08:00**

**Lab Sample ID: 240-105752-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U | 0.20 | 0.13 | ug/L | | 12/18/18 09:56 | 12/19/18 13:30 | 1 |

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

TestAmerica Job ID: 240-105752-1

## General Chemistry

**Client Sample ID: W-12610-121318-SSH-18112**
**Date Collected: 12/13/18 08:30**
**Date Received: 12/14/18 08:00**

**Lab Sample ID: 240-105752-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM | 4.8 | U | 4.8 | 0.97 | mg/L | | | 12/28/18 10:29 | 1 |
| Chemical Oxygen Demand | 10 | U | 10 | 4.1 | mg/L | | | 12/21/18 12:20 | 1 |
| **pH** | **7.9** | **HF** | 0.1 | 0.1 | SU | | | 12/14/18 14:18 | 1 |
| Ammonia | 0.20 | U | 0.20 | 0.093 | mg/L | | | 12/28/18 14:00 | 1 |
| Biochemical Oxygen Demand | 2.0 | U | 2.0 | 1.2 | mg/L | | | 12/14/18 16:09 | 1 |
| **Total Suspended Solids** | **3.0** | **J** | 4.0 | 2.2 | mg/L | | | 12/20/18 14:13 | 1 |
| Total Phosphorus as P | 0.10 | U | 0.10 | 0.037 | mg/L | | | 12/26/18 08:26 | 1 |

## GC/MS VOA

### Analysis Batch: 360538

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 624 | |
| MB 240-360538/31 | Method Blank | Total/NA | Water | 624 | |
| LCS 240-360538/32 | Lab Control Sample | Total/NA | Water | 624 | |

## GC Semi VOA

### Prep Batch: 360348

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 608 | |
| MB 240-360348/17-A | Method Blank | Total/NA | Water | 608 | |
| LCS 240-360348/18-A | Lab Control Sample | Total/NA | Water | 608 | |

### Analysis Batch: 360679

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 608 | 360348 |
| MB 240-360348/17-A | Method Blank | Total/NA | Water | 608 | 360348 |
| LCS 240-360348/18-A | Lab Control Sample | Total/NA | Water | 608 | 360348 |

## Metals

### Prep Batch: 360541

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total Recoverable | Water | 200.7 | |
| MB 240-360541/1-A | Method Blank | Total Recoverable | Water | 200.7 | |
| LCS 240-360541/2-A | Lab Control Sample | Total Recoverable | Water | 200.7 | |

### Prep Batch: 360545

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 245.1 | |

### Analysis Batch: 360822

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 245.1 | 360545 |

### Analysis Batch: 360834

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 240-360541/1-A | Method Blank | Total Recoverable | Water | 200.7 Rev 4.4 | 360541 |
| LCS 240-360541/2-A | Lab Control Sample | Total Recoverable | Water | 200.7 Rev 4.4 | 360541 |

### Analysis Batch: 360946

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total Recoverable | Water | 200.7 Rev 4.4 | 360541 |

## General Chemistry

### Analysis Batch: 359980

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 4500 H+ B-2000 | |
| LCS 240-359980/2 | Lab Control Sample | Total/NA | Water | 4500 H+ B-2000 | |
| LCS 240-359980/21 | Lab Control Sample | Total/NA | Water | 4500 H+ B-2000 | |

# QC Association Summary

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

TestAmerica Job ID: 240-105752-1

## Analysis Batch: 360084

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 5210B-2001 | |
| SCB 240-360084/2 | Method Blank | Total/NA | Water | 5210B-2001 | |
| USB 240-360084/1 | Method Blank | Total/NA | Water | 5210B-2001 | |
| LCS 240-360084/3 | Lab Control Sample | Total/NA | Water | 5210B-2001 | |

## Analysis Batch: 361052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | SM 2540D | |
| MB 240-361052/1 | Method Blank | Total/NA | Water | SM 2540D | |
| LCS 240-361052/2 | Lab Control Sample | Total/NA | Water | SM 2540D | |

## Analysis Batch: 361227

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 410.4 | |
| MB 240-361227/9 | Method Blank | Total/NA | Water | 410.4 | |
| LCS 240-361227/10 | Lab Control Sample | Total/NA | Water | 410.4 | |

## Analysis Batch: 361647

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | SM4500 P E-1999 | |
| MB 240-361647/3 | Method Blank | Total/NA | Water | SM4500 P E-1999 | |
| LCS 240-361647/4 | Lab Control Sample | Total/NA | Water | SM4500 P E-1999 | |
| 240-105752-1 MS | W-12610-121318-SSH-18112 | Total/NA | Water | SM4500 P E-1999 | |
| 240-105752-1 MSD | W-12610-121318-SSH-18112 | Total/NA | Water | SM4500 P E-1999 | |

## Analysis Batch: 362162

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 1664A | |
| MB 240-362162/1 | Method Blank | Total/NA | Water | 1664A | |
| LCS 240-362162/2 | Lab Control Sample | Total/NA | Water | 1664A | |

## Analysis Batch: 362262

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-105752-1 | W-12610-121318-SSH-18112 | Total/NA | Water | 4500 NH3 D-2011 | |
| MB 240-362262/7 | Method Blank | Total/NA | Water | 4500 NH3 D-2011 | |
| LCS 240-362262/8 | Lab Control Sample | Total/NA | Water | 4500 NH3 D-2011 | |
| 240-105752-1 MS | W-12610-121318-SSH-18112 | Total/NA | Water | 4500 NH3 D-2011 | |
| 240-105752-1 MSD | W-12610-121318-SSH-18112 | Total/NA | Water | 4500 NH3 D-2011 | |

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

**Lab Sample ID: MB 240-360538/31**
**Matrix: Water**
**Analysis Batch: 360538**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 1.0 | U | 1.0 | 0.040 | ug/L | | | 12/18/18 22:05 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *69 - 120* | | *12/18/18 22:05* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *61 - 138* | | *12/18/18 22:05* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *73 - 120* | | *12/18/18 22:05* | *1* |

**Lab Sample ID: LCS 240-360538/32**
**Matrix: Water**
**Analysis Batch: 360538**

**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 | 23.8 | | ug/L | | 119 | 10 - 251 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *69 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *61 - 138* |
| *Toluene-d8 (Surr)* | *103* | | *73 - 120* |

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

**Lab Sample ID: MB 240-360348/17-A**
**Matrix: Water**
**Analysis Batch: 360679**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 360348**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.10 | U | 0.10 | 0.056 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |
| Aroclor-1221 | 0.10 | U | 0.10 | 0.057 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |
| Aroclor-1232 | 0.10 | U | 0.10 | 0.074 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |
| Aroclor-1242 | 0.10 | U | 0.10 | 0.076 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |
| Aroclor-1248 | 0.10 | U | 0.10 | 0.050 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |
| Aroclor-1254 | 0.10 | U | 0.10 | 0.040 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |
| Aroclor-1260 | 0.10 | U | 0.10 | 0.046 | ug/L | | 12/17/18 11:32 | 12/19/18 08:01 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *98* | | *10 - 114* | *12/17/18 11:32* | *12/19/18 08:01* | *1* |
| *Tetrachloro-m-xylene* | *81* | | *15 - 131* | *12/17/18 11:32* | *12/19/18 08:01* | *1* |

**Lab Sample ID: LCS 240-360348/18-A**
**Matrix: Water**
**Analysis Batch: 360679**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 360348**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 2.50 | 1.86 | | ug/L | | 74 | 50 - 114 |
| Aroclor-1260 | 2.50 | 2.40 | | ug/L | | 96 | 8 - 127 |

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

**Lab Sample ID: LCS 240-360348/18-A**
**Matrix: Water**
**Analysis Batch: 360679**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 360348**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *74* | | *10 - 114* |
| *Tetrachloro-m-xylene* | *74* | | *15 - 131* |

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

**Lab Sample ID: MB 240-360541/1-A**
**Matrix: Water**
**Analysis Batch: 360834**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 360541**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 1.42 | J | 5.0 | 0.62 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |
| Cadmium | 2.0 | U | 2.0 | 0.20 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |
| Chromium | 5.0 | U | 5.0 | 0.63 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |
| Copper | 20 | U | 20 | 3.5 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |
| Iron | 100 | U | 100 | 26 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |
| Nickel | 20 | U | 20 | 2.2 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |
| Lead | 3.0 | U | 3.0 | 2.8 | ug/L | | 12/18/18 14:00 | 12/19/18 12:02 | 1 |

**Lab Sample ID: LCS 240-360541/2-A**
**Matrix: Water**
**Analysis Batch: 360834**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 360541**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Silver | 50.0 | 48.3 | | ug/L | | 97 | 85 - 115 |
| Cadmium | 50.0 | 46.1 | | ug/L | | 92 | 85 - 115 |
| Chromium | 200 | 171 | | ug/L | | 86 | 85 - 115 |
| Copper | 250 | 233 | | ug/L | | 93 | 85 - 115 |
| Iron | 1000 | 945 | | ug/L | | 95 | 85 - 115 |
| Nickel | 500 | 466 | | ug/L | | 93 | 85 - 115 |
| Lead | 500 | 460 | | ug/L | | 92 | 85 - 115 |

## Method: 1664A - HEM and SGT-HEM

**Lab Sample ID: MB 240-362162/1**
**Matrix: Water**
**Analysis Batch: 362162**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM | 5.0 | U | 5.0 | 1.0 | mg/L | | | 12/28/18 10:29 | 1 |

**Lab Sample ID: LCS 240-362162/2**
**Matrix: Water**
**Analysis Batch: 362162**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| HEM | 40.0 | 32.70 | | mg/L | | 82 | 78 - 114 |

## Method: 410.4 - COD

**Lab Sample ID: MB 240-361227/9**
**Matrix: Water**
**Analysis Batch: 361227**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | 10 | U | 10 | 4.1 | mg/L | | | 12/21/18 11:26 | 1 |

**Lab Sample ID: LCS 240-361227/10**
**Matrix: Water**
**Analysis Batch: 361227**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | 55.9 | 52.3 | | mg/L | | 94 | 90 - 110 |

## Method: 4500 H+ B-2000 - pH

**Lab Sample ID: LCS 240-359980/2**
**Matrix: Water**
**Analysis Batch: 359980**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 8.46 | 8.4 | | SU | | 99 | 97 - 103 |

**Lab Sample ID: LCS 240-359980/21**
**Matrix: Water**
**Analysis Batch: 359980**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 8.46 | 8.4 | | SU | | 99 | 97 - 103 |

## Method: 4500 NH3 D-2011 - Ammonia

**Lab Sample ID: MB 240-362262/7**
**Matrix: Water**
**Analysis Batch: 362262**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.093 | mg/L | | | 12/28/18 12:02 | 1 |

**Lab Sample ID: LCS 240-362262/8**
**Matrix: Water**
**Analysis Batch: 362262**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 13.4 | 12.9 | | mg/L | | 97 | 85 - 114 |

**Lab Sample ID: 240-105752-1 MS**
**Matrix: Water**
**Analysis Batch: 362262**

**Client Sample ID: W-12610-121318-SSH-18112**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 2.50 | 2.45 | | mg/L | | 98 | 79 - 130 |

## Method: 4500 NH3 D-2011 - Ammonia (Continued)

**Lab Sample ID: 240-105752-1 MSD**
**Matrix: Water**
**Analysis Batch: 362262**

**Client Sample ID: W-12610-121318-SSH-18112**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 2.50 | 2.56 | | mg/L | | 103 | 79 - 130 | 5 | 10 |

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

**Lab Sample ID: SCB 240-360084/2**
**Matrix: Water**
**Analysis Batch: 360084**

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

| Analyte | SCB Result | SCB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 2.0 | U s | 2.0 | 1.2 | mg/L | | | 12/14/18 13:56 | 1 |

**Lab Sample ID: USB 240-360084/1**
**Matrix: Water**
**Analysis Batch: 360084**

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

| Analyte | USB Result | USB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 2.0 | U | 2.0 | 1.2 | mg/L | | | 12/14/18 13:54 | 1 |

**Lab Sample ID: LCS 240-360084/3**
**Matrix: Water**
**Analysis Batch: 360084**

**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 | 176 | | mg/L | | 89 | 85 - 115 |

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

**Lab Sample ID: MB 240-361052/1**
**Matrix: Water**
**Analysis Batch: 361052**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 4.0 | U | 4.0 | 2.2 | mg/L | | | 12/20/18 14:13 | 1 |

**Lab Sample ID: LCS 240-361052/2**
**Matrix: Water**
**Analysis Batch: 361052**

**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 | 25.5 | 24.0 | | mg/L | | 94 | 64 - 120 |

## Method: SM4500 P E-1999 - Phosphorus

**Lab Sample ID: MB 240-361647/3**
**Matrix: Water**
**Analysis Batch: 361647**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.10 | U | 0.10 | 0.037 | mg/L | | | 12/26/18 08:10 | 1 |

**Lab Sample ID: LCS 240-361647/4**
**Matrix: Water**
**Analysis Batch: 361647**

**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 | 0.405 | 0.435 | | mg/L | | 108 | 77 - 120 |

**Lab Sample ID: 240-105752-1 MS**
**Matrix: Water**
**Analysis Batch: 361647**

**Client Sample ID: W-12610-121318-SSH-18112**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.10 | U | 0.500 | 0.501 | | mg/L | | 100 | 38 - 156 |

**Lab Sample ID: 240-105752-1 MSD**
**Matrix: Water**
**Analysis Batch: 361647**

**Client Sample ID: W-12610-121318-SSH-18112**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.10 | U | 0.500 | 0.528 | | mg/L | | 106 | 38 - 156 | 5 | 29 |

# Surrogate Summary

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

TestAmerica Job ID: 240-105752-1

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | BFB | DCA | TOL |
| Lab Sample ID | Client Sample ID | (69-120) | (61-138) | (73-120) |
| 240-105752-1 | W-12610-121318-SSH-18112 | 102 | 114 | 101 |
| LCS 240-360538/32 | Lab Control Sample | 103 | 108 | 103 |
| MB 240-360538/31 | Method Blank | 102 | 112 | 101 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | DCBP2 | TCX2 |
| Lab Sample ID | Client Sample ID | (10-114) | (15-131) |
| 240-105752-1 | W-12610-121318-SSH-18112 | 22 | 36 |
| LCS 240-360348/18-A | Lab Control Sample | 74 | 74 |
| MB 240-360348/17-A | Method Blank | 98 | 81 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

# Lab Chronicle

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

TestAmerica Job ID: 240-105752-1

**Client Sample ID: W-12610-121318-SSH-18112** **Lab Sample ID: 240-105752-1**
**Date Collected: 12/13/18 08:30** **Matrix: Water**
**Date Received: 12/14/18 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 624 | | 1 | 360538 | 12/19/18 00:34 | HMB | TAL CAN |
| Total/NA | Prep | 608 | | | 360348 | 12/17/18 11:32 | BMB | TAL CAN |
| Total/NA | Analysis | 608 | | 1 | 360679 | 12/19/18 13:31 | CSC | TAL CAN |
| Total Recoverable | Prep | 200.7 | | | 360541 | 12/18/18 14:00 | SLD | TAL CAN |
| Total Recoverable | Analysis | 200.7 Rev 4.4 | | 1 | 360946 | 12/19/18 17:38 | WKD | TAL CAN |
| Total/NA | Prep | 245.1 | | | 360545 | 12/18/18 09:56 | SLD | TAL CAN |
| Total/NA | Analysis | 245.1 | | 1 | 360822 | 12/19/18 13:30 | AJC | TAL CAN |
| Total/NA | Analysis | 1664A | | 1 | 362162 | 12/28/18 10:29 | ACR | TAL CAN |
| Total/NA | Analysis | 410.4 | | 1 | 361227 | 12/21/18 12:20 | TPH | TAL CAN |
| Total/NA | Analysis | 4500 H+ B-2000 | | 1 | 359980 | 12/14/18 14:18 | MAC | TAL CAN |
| Total/NA | Analysis | 4500 NH3 D-2011 | | 1 | 362262 | 12/28/18 14:00 | JMB | TAL CAN |
| Total/NA | Analysis | 5210B-2001 | | 1 | 360084 | 12/14/18 16:09 | JESW | TAL CAN |
| Total/NA | Analysis | SM 2540D | | 1 | 361052 | 12/20/18 14:13 | AMT | TAL CAN |
| Total/NA | Analysis | SM4500 P E-1999 | | 1 | 361647 | 12/26/18 08:26 | TPH | TAL CAN |

**Laboratory References:**

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

# Accreditation/Certification Summary

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

TestAmerica Job ID: 240-105752-1

## Laboratory: TestAmerica Canton

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

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

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

2.2/C2.2

# Chain of Custody Record

280109

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

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

| Client Contact | Project Manager: M. Tomka | Site Contact: JE Pardys | Date: 12/13/18 | COC No: 280109 |
|---|---|---|---|---|
| Company Name: GHD | Tel/Fax: | Lab Contact: A. Hecklar | Carrier: FedEx | 1 of 1 COCs |
| Address: 26850 Haggerty Rd | Analysis Turnaround Time | | | Sampler: S. Heavenrich |
| City/State/Zip: Farmington Hills, MI | ☐ CALENDAR DAYS ☒ WORKING DAYS | | | For Lab Use Only: |
| Phone: 248 893 3700 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: | ☒ 2 weeks | | | Lab Sampling: |
| Project Name: RacTrust Bay City | ☐ 1 week | | | |
| Site: 12610A - T04 | ☐ 2 days | | | Job / SDG No.: |
| PO # 24006288 | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | select metals | ammonia | COD | T. phosphorus | vinyl Chloride | PCBs | BOD | H+-pH | TSS | HEM | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-12610-121318-SSH-18112 | 12/13/18 | 0830 | C, G | WT | 11 | N | N | X | X | X | X | X | X | X | X | X | X | |

240-105752 Chain of Custody

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

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

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

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

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

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

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 579758 | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____ |
|---|---|---|---|

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| | GHD | 12/13/18 1000 | | TA 12-14-18 0800 | 12-14-18 0800 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| | | | | RAC 12-14-18 | |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |
| | | | | | |



12/31/2018

**TestAmerica Canton Sample Receipt Form/Narrative** **Login # :** 105752
**Canton Facility**

Client GHD Site Name

Cooler Received on 12-14-18 Opened on 12-14-18 0800

Cooler unpacked by: Ryan Gribley

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

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

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

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

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

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.2 °C Corrected Cooler Temp. 2.2 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes (No)
16. Was a LL Hg or Me Hg trip blank present? Yes (No)

**Tests that are not checked for pH by Receiving:**

**VOAs**
**Oil and Grease**
**TOC**

Contacted PM Date by via Verbal Voice Mail Other

Concerning

**17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES**

Samples processed by: RL

**18. SAMPLE CONDITION**

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

**19. SAMPLE PRESERVATION**

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

WI-NC-099

# Login Container Summary Report



Temperature readings: _____

| Client Sample ID | Lab ID | Container Type | Container pH | Preservative Added (mls) | Lot # |
|---|---|---|---|---|---|
| W-12610-121318-SSH-18112 | 240-105752-E-1 | Plastic 500ml - with Sulfuric Acid | <2 | _____ | _____ |
| W-12610-121318-SSH-18112 | 240-105752-F-1 | Plastic 500ml - with Nitric Acid | <2 | _____ | _____ |
| W-12610-121318-SSH-18112 | 240-105752-J-1 | Amber Glass 1 liter - Sulfuric Acid | _____ | _____ | _____ |
| W-12610-121318-SSH-18112 | 240-105752-K-1 | Amber Glass 1 liter - Sulfuric Acid | _____ | _____ | _____ |

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

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

Laboratory Job ID: 240-113550-1
Client Project/Site: 12610-T04, RACER Bay City

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

Attn: Ms. Ruth Mickle

Denise D Heckler

*Authorized for release by:*
*6/17/2019 8:52:11 AM*

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

# Table of Contents

## Job ID: 240-113550-1

### Laboratory: Eurofins TestAmerica, Canton

**Narrative**

**Job Narrative**
**240-113550-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/1/2019 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

**GC/MS VOA**
Method(s) 624: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 240-384260.

No additional analytical or quality issues were noted, other than those described above or 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-12610-053119-SSH-00319 (240-113550-1). The continuing calibration blanks and method blanks may not support the lower PQL.

Method(s) 245.1: The laboratory control sample (LCS) for preparation batch 240-384127 and analytical batch 240-384688 recovered outside control limits for the following analytes: mercury. These analytes were biased high in the LCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

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

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

**Organic Prep**
Method(s) 3510C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-384384.

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

# Definitions/Glossary

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

Job ID: 240-113550-1

## 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 |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

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

# Sample Summary

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

Job ID: 240-113550-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Water | 05/31/19 09:30 | 06/01/19 09:50 | |
| 240-113550-2 | W-12610-053119-SSH-00519 | Water | 05/31/19 09:05 | 06/01/19 09:50 | |

# Detection Summary

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

Job ID: 240-113550-1

## Client Sample ID: W-12610-053119-SSH-00319 — Lab Sample ID: 240-113550-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1.7 | J B | 5.0 | 0.63 | ug/L | 1 | | 200.7 Rev 4.4 | Total Recoverable |
| Copper | 12 | J | 20 | 3.5 | ug/L | 1 | | 200.7 Rev 4.4 | Total Recoverable |
| Iron | 110 | | 100 | 26 | ug/L | 1 | | 200.7 Rev 4.4 | Total Recoverable |
| Nickel | 5.9 | J | 20 | 2.2 | ug/L | 1 | | 200.7 Rev 4.4 | Total Recoverable |
| pH | 7.5 | HF | 0.1 | 0.1 | SU | 1 | | 4500 H+ B-2000 | Total/NA |

## Client Sample ID: W-12610-053119-SSH-00519 — Lab Sample ID: 240-113550-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 1.5 | | 0.095 | 0.072 | ug/L | 1 | | 608 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

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

Job ID: 240-113550-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 624 | Volatile Organic Compounds (GC/MS) | 40CFR136A | TAL CAN |
| 608 | Polychlorinated Biphenyls (PCBs) (GC) | 40CFR136A | TAL CAN |
| 200.7 Rev 4.4 | Metals (ICP) | EPA | TAL CAN |
| 245.1 | Mercury (CVAA) | EPA | TAL CAN |
| 1664A | HEM and SGT-HEM | 1664A | TAL CAN |
| 410.4 | COD | MCAWW | TAL CAN |
| 4500 H+ B-2000 | pH | SM | TAL CAN |
| 4500 NH3 D-2011 | Ammonia | SM | TAL CAN |
| 5210B-2001 | BOD, 5-Day | SM | TAL CAN |
| SM 2540D | Solids, Total Suspended (TSS) | SM | TAL CAN |
| SM4500 P E-1999 | Phosphorus | SM | TAL CAN |
| 200.7 | Preparation, Total Recoverable Metals | EPA | TAL CAN |
| 245.1 | Preparation, Mercury | EPA | TAL CAN |
| 608 | Liquid-Liquid Extraction (Separatory Funnel) | 40CFR136A | TAL CAN |

**Protocol References:**

1664A = EPA-821-98-002

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

EPA = US Environmental Protection Agency

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

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

**Laboratory References:**

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

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

Job ID: 240-113550-1

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

**Client Sample ID: W-12610-053119-SSH-00319**
**Date Collected: 05/31/19 09:30**
**Date Received: 06/01/19 09:50**

**Lab Sample ID: 240-113550-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 1.0 | U | 1.0 | 0.20 | ug/L | | | 06/04/19 03:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *69 - 120* | | *06/04/19 03:19* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *79* | | *61 - 138* | | *06/04/19 03:19* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *73 - 120* | | *06/04/19 03:19* | *1* |

Client: GHD Services Inc.
Job ID: 240-113550-1
Project/Site: 12610-T04, RACER Bay City

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

**Client Sample ID: W-12610-053119-SSH-00319**
**Lab Sample ID: 240-113550-1**
**Date Collected: 05/31/19 09:30**
**Matrix: Water**
**Date Received: 06/01/19 09:50**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.096 | U | 0.096 | 0.054 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |
| Aroclor-1221 | 0.096 | U | 0.096 | 0.055 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |
| Aroclor-1232 | 0.096 | U | 0.096 | 0.071 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |
| Aroclor-1242 | 0.096 | U | 0.096 | 0.073 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |
| Aroclor-1248 | 0.096 | U | 0.096 | 0.048 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |
| Aroclor-1254 | 0.096 | U | 0.096 | 0.038 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |
| Aroclor-1260 | 0.096 | U | 0.096 | 0.044 | ug/L | | 06/04/19 09:41 | 06/05/19 16:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *80* | | *10 - 114* | *06/04/19 09:41* | *06/05/19 16:26* | *1* |
| *Tetrachloro-m-xylene* | *78* | | *15 - 131* | *06/04/19 09:41* | *06/05/19 16:26* | *1* |

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

Job ID: 240-113550-1

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

**Client Sample ID: W-12610-053119-SSH-00519**
**Date Collected: 05/31/19 09:05**
**Date Received: 06/01/19 09:50**

**Lab Sample ID: 240-113550-2**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |
| **Aroclor-1242** | **1.5** | | 0.095 | 0.072 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 06/04/19 09:41 | 06/05/19 16:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *74* | | *10 - 114* | *06/04/19 09:41* | *06/05/19 16:47* | *1* |
| *Tetrachloro-m-xylene* | *76* | | *15 - 131* | *06/04/19 09:41* | *06/05/19 16:47* | *1* |

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

Job ID: 240-113550-1

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

**Client Sample ID: W-12610-053119-SSH-00319**
**Date Collected: 05/31/19 09:30**
**Date Received: 06/01/19 09:50**

**Lab Sample ID: 240-113550-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 5.0 | U | 5.0 | 0.62 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |
| Cadmium | 2.0 | U | 2.0 | 0.20 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |
| **Chromium** | **1.7** | **J B** | 5.0 | 0.63 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |
| **Copper** | **12** | **J** | 20 | 3.5 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |
| **Iron** | **110** | | 100 | 26 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |
| **Nickel** | **5.9** | **J** | 20 | 2.2 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |
| Lead | 3.0 | U | 3.0 | 2.8 | ug/L | | 06/03/19 14:00 | 06/04/19 19:04 | 1 |

Client: GHD Services Inc.
Job ID: 240-113550-1
Project/Site: 12610-T04, RACER Bay City

## Method: 245.1 - Mercury (CVAA)

**Client Sample ID: W-12610-053119-SSH-00319**
**Lab Sample ID: 240-113550-1**
**Date Collected: 05/31/19 09:30**
**Matrix: Water**
**Date Received: 06/01/19 09:50**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U * | 0.20 | 0.13 | ug/L | | 06/03/19 14:00 | 06/05/19 15:37 | 1 |

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

Job ID: 240-113550-1

## General Chemistry

**Client Sample ID: W-12610-053119-SSH-00319**
**Date Collected: 05/31/19 09:30**
**Date Received: 06/01/19 09:50**

**Lab Sample ID: 240-113550-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM | 4.8 | U | 4.8 | 0.99 | mg/L | | | 06/14/19 10:22 | 1 |
| Chemical Oxygen Demand | 10 | U | 10 | 4.1 | mg/L | | | 06/04/19 09:57 | 1 |
| **pH** | **7.5** | **HF** | 0.1 | 0.1 | SU | | | 06/01/19 12:23 | 1 |
| Ammonia | 0.20 | U | 0.20 | 0.093 | mg/L | | | 06/14/19 17:53 | 1 |
| Biochemical Oxygen Demand | 2.0 | U | 2.0 | 1.2 | mg/L | | | 06/01/19 13:38 | 1 |
| Total Suspended Solids | 4.0 | U | 4.0 | 2.2 | mg/L | | | 06/06/19 10:01 | 1 |
| Total Phosphorus as P | 0.10 | U | 0.10 | 0.037 | mg/L | | | 06/03/19 09:13 | 1 |

## GC/MS VOA

### Analysis Batch: 384260

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 624 | |
| MB 240-384260/8 | Method Blank | Total/NA | Water | 624 | |
| LCS 240-384260/5 | Lab Control Sample | Total/NA | Water | 624 | |

## GC Semi VOA

### Prep Batch: 384384

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 608 | |
| 240-113550-2 | W-12610-053119-SSH-00519 | Total/NA | Water | 608 | |
| MB 240-384384/18-A | Method Blank | Total/NA | Water | 608 | |
| LCS 240-384384/19-A | Lab Control Sample | Total/NA | Water | 608 | |

### Analysis Batch: 384531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 608 | 384384 |
| 240-113550-2 | W-12610-053119-SSH-00519 | Total/NA | Water | 608 | 384384 |
| MB 240-384384/18-A | Method Blank | Total/NA | Water | 608 | 384384 |
| LCS 240-384384/19-A | Lab Control Sample | Total/NA | Water | 608 | 384384 |

## Metals

### Prep Batch: 384126

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total Recoverable | Water | 200.7 | |
| MB 240-384126/1-A | Method Blank | Total Recoverable | Water | 200.7 | |
| LCS 240-384126/2-A | Lab Control Sample | Total Recoverable | Water | 200.7 | |
| 240-113550-1 MS | W-12610-053119-SSH-00319 | Total Recoverable | Water | 200.7 | |
| 240-113550-1 MSD | W-12610-053119-SSH-00319 | Total Recoverable | Water | 200.7 | |

### Prep Batch: 384127

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 245.1 | |
| MB 240-384127/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 240-384127/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| 240-113550-1 MS | W-12610-053119-SSH-00319 | Total/NA | Water | 245.1 | |
| 240-113550-1 MSD | W-12610-053119-SSH-00319 | Total/NA | Water | 245.1 | |

### Analysis Batch: 384578

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total Recoverable | Water | 200.7 Rev 4.4 | 384126 |
| MB 240-384126/1-A | Method Blank | Total Recoverable | Water | 200.7 Rev 4.4 | 384126 |
| LCS 240-384126/2-A | Lab Control Sample | Total Recoverable | Water | 200.7 Rev 4.4 | 384126 |
| 240-113550-1 MS | W-12610-053119-SSH-00319 | Total Recoverable | Water | 200.7 Rev 4.4 | 384126 |
| 240-113550-1 MSD | W-12610-053119-SSH-00319 | Total Recoverable | Water | 200.7 Rev 4.4 | 384126 |

### Analysis Batch: 384688

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 245.1 | 384127 |
| MB 240-384127/1-A | Method Blank | Total/NA | Water | 245.1 | 384127 |
| LCS 240-384127/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 384127 |
| 240-113550-1 MS | W-12610-053119-SSH-00319 | Total/NA | Water | 245.1 | 384127 |

## Metals (Continued)

### Analysis Batch: 384688 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 MSD | W-12610-053119-SSH-00319 | Total/NA | Water | 245.1 | 384127 |

## General Chemistry

### Analysis Batch: 384045

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 4500 H+ B-2000 | |
| LCS 240-384045/2 | Lab Control Sample | Total/NA | Water | 4500 H+ B-2000 | |

### Analysis Batch: 384052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 5210B-2001 | |
| SCB 240-384052/2 | Method Blank | Total/NA | Water | 5210B-2001 | |
| USB 240-384052/1 | Method Blank | Total/NA | Water | 5210B-2001 | |
| LCS 240-384052/3 | Lab Control Sample | Total/NA | Water | 5210B-2001 | |

### Analysis Batch: 384110

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | SM4500 P E-1999 | |
| MB 240-384110/3 | Method Blank | Total/NA | Water | SM4500 P E-1999 | |
| LCS 240-384110/4 | Lab Control Sample | Total/NA | Water | SM4500 P E-1999 | |

### Analysis Batch: 384337

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 410.4 | |
| MB 240-384337/40 | Method Blank | Total/NA | Water | 410.4 | |
| LCS 240-384337/41 | Lab Control Sample | Total/NA | Water | 410.4 | |

### Analysis Batch: 384841

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | SM 2540D | |
| MB 240-384841/1 | Method Blank | Total/NA | Water | SM 2540D | |
| LCS 240-384841/2 | Lab Control Sample | Total/NA | Water | SM 2540D | |

### Analysis Batch: 386211

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 1664A | |
| MB 240-386211/1 | Method Blank | Total/NA | Water | 1664A | |
| MB 240-386211/25 | Method Blank | Total/NA | Water | 1664A | |
| LCS 240-386211/2 | Lab Control Sample | Total/NA | Water | 1664A | |
| LCS 240-386211/26 | Lab Control Sample | Total/NA | Water | 1664A | |
| 240-113550-1 MS | W-12610-053119-SSH-00319 | Total/NA | Water | 1664A | |

### Analysis Batch: 386334

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-113550-1 | W-12610-053119-SSH-00319 | Total/NA | Water | 4500 NH3 D-2011 | |
| MB 240-386334/7 | Method Blank | Total/NA | Water | 4500 NH3 D-2011 | |

## General Chemistry (Continued)

### Analysis Batch: 386334 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 240-386334/8 | Lab Control Sample | Total/NA | Water | 4500 NH3 D-2011 | |

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

**Lab Sample ID: MB 240-384260/8**
**Matrix: Water**
**Analysis Batch: 384260**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 1.0 | U | 1.0 | 0.20 | ug/L | | | 06/03/19 18:27 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *69 - 120* | | *06/03/19 18:27* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *87* | | *61 - 138* | | *06/03/19 18:27* | *1* |
| *Toluene-d8 (Surr)* | *110* | | *73 - 120* | | *06/03/19 18:27* | *1* |

**Lab Sample ID: LCS 240-384260/5**
**Matrix: Water**
**Analysis Batch: 384260**

**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 | 24.4 | | ug/L | | 122 | 10 - 251 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *69 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *61 - 138* |
| *Toluene-d8 (Surr)* | *100* | | *73 - 120* |

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

**Lab Sample ID: MB 240-384384/18-A**
**Matrix: Water**
**Analysis Batch: 384531**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 384384**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.10 | U | 0.10 | 0.056 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |
| Aroclor-1221 | 0.10 | U | 0.10 | 0.057 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |
| Aroclor-1232 | 0.10 | U | 0.10 | 0.074 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |
| Aroclor-1242 | 0.10 | U | 0.10 | 0.076 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |
| Aroclor-1248 | 0.10 | U | 0.10 | 0.050 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |
| Aroclor-1254 | 0.10 | U | 0.10 | 0.040 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |
| Aroclor-1260 | 0.10 | U | 0.10 | 0.046 | ug/L | | 06/04/19 09:49 | 06/05/19 14:40 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *79* | | *10 - 114* | *06/04/19 09:49* | *06/05/19 14:40* | *1* |
| *Tetrachloro-m-xylene* | *74* | | *15 - 131* | *06/04/19 09:49* | *06/05/19 14:40* | *1* |

**Lab Sample ID: LCS 240-384384/19-A**
**Matrix: Water**
**Analysis Batch: 384531**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 384384**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 2.50 | 1.89 | | ug/L | | 76 | 50 - 114 |
| Aroclor-1260 | 2.50 | 1.91 | | ug/L | | 76 | 8 - 127 |

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

**Lab Sample ID: LCS 240-384384/19-A**
**Matrix: Water**
**Analysis Batch: 384531**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 384384**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *76* | | *10 - 114* |
| *Tetrachloro-m-xylene* | *77* | | *15 - 131* |

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

**Lab Sample ID: MB 240-384126/1-A**
**Matrix: Water**
**Analysis Batch: 384578**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 384126**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 5.0 | U | 5.0 | 0.62 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |
| Cadmium | 2.0 | U | 2.0 | 0.20 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |
| Chromium | 0.841 | J | 5.0 | 0.63 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |
| Copper | 20 | U | 20 | 3.5 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |
| Iron | 100 | U | 100 | 26 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |
| Nickel | 20 | U | 20 | 2.2 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |
| Lead | 3.0 | U | 3.0 | 2.8 | ug/L | | 06/03/19 14:00 | 06/04/19 19:41 | 1 |

**Lab Sample ID: LCS 240-384126/2-A**
**Matrix: Water**
**Analysis Batch: 384578**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 384126**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Silver | 50.0 | 52.9 | | ug/L | | 106 | 85 - 115 |
| Cadmium | 50.0 | 51.1 | | ug/L | | 102 | 85 - 115 |
| Chromium | 200 | 205 | | ug/L | | 102 | 85 - 115 |
| Copper | 250 | 269 | | ug/L | | 108 | 85 - 115 |
| Iron | 1000 | 1020 | | ug/L | | 102 | 85 - 115 |
| Nickel | 500 | 503 | | ug/L | | 101 | 85 - 115 |
| Lead | 500 | 479 | | ug/L | | 96 | 85 - 115 |

**Lab Sample ID: 240-113550-1 MS**
**Matrix: Water**
**Analysis Batch: 384578**

**Client Sample ID: W-12610-053119-SSH-00319**
**Prep Type: Total Recoverable**
**Prep Batch: 384126**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 5.0 | U | 50.0 | 54.1 | | ug/L | | 108 | 75 - 125 |
| Cadmium | 2.0 | U | 50.0 | 52.8 | | ug/L | | 106 | 75 - 125 |
| Chromium | 1.7 | J B | 200 | 209 | | ug/L | | 104 | 75 - 125 |
| Copper | 12 | J | 250 | 288 | | ug/L | | 110 | 75 - 125 |
| Iron | 110 | | 1000 | 1140 | | ug/L | | 104 | 75 - 125 |
| Nickel | 5.9 | J | 500 | 527 | | ug/L | | 104 | 75 - 125 |
| Lead | 3.0 | U | 500 | 491 | | ug/L | | 98 | 75 - 125 |

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

**Lab Sample ID: 240-113550-1 MSD** — **Client Sample ID: W-12610-053119-SSH-00319**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 384578** — **Prep Batch: 384126**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silver | 5.0 | U | 50.0 | 54.5 | | ug/L | | 109 | 75 - 125 | 1 | 20 |
| Cadmium | 2.0 | U | 50.0 | 52.9 | | ug/L | | 106 | 75 - 125 | 0 | 20 |
| Chromium | 1.7 | J B | 200 | 208 | | ug/L | | 103 | 75 - 125 | 1 | 20 |
| Copper | 12 | J | 250 | 287 | | ug/L | | 110 | 75 - 125 | 0 | 20 |
| Iron | 110 | | 1000 | 1140 | | ug/L | | 103 | 75 - 125 | 1 | 20 |
| Nickel | 5.9 | J | 500 | 527 | | ug/L | | 104 | 75 - 125 | 0 | 20 |
| Lead | 3.0 | U | 500 | 489 | | ug/L | | 98 | 75 - 125 | 0 | 20 |

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 240-384127/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 384688** — **Prep Batch: 384127**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U | 0.20 | 0.13 | ug/L | | 06/03/19 14:00 | 06/05/19 15:29 | 1 |

**Lab Sample ID: LCS 240-384127/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 384688** — **Prep Batch: 384127**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 5.00 | 5.80 | * | ug/L | | 116 | 85 - 115 |

**Lab Sample ID: 240-113550-1 MS** — **Client Sample ID: W-12610-053119-SSH-00319**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 384688** — **Prep Batch: 384127**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U * | 1.00 | 1.18 | | ug/L | | 118 | 70 - 130 |

**Lab Sample ID: 240-113550-1 MSD** — **Client Sample ID: W-12610-053119-SSH-00319**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 384688** — **Prep Batch: 384127**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U * | 1.00 | 1.09 | | ug/L | | 109 | 70 - 130 | 7 | 20 |

## Method: 1664A - HEM and SGT-HEM

**Lab Sample ID: MB 240-386211/1** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 386211**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM | 5.0 | U | 5.0 | 1.0 | mg/L | | | 06/14/19 09:43 | 1 |

## Method: 1664A - HEM and SGT-HEM (Continued)

**Lab Sample ID: MB 240-386211/25**
**Matrix: Water**
**Analysis Batch: 386211**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM | 1.60 | J | 5.0 | 1.0 | mg/L | | | 06/14/19 10:22 | 1 |

**Lab Sample ID: LCS 240-386211/2**
**Matrix: Water**
**Analysis Batch: 386211**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| HEM | 40.0 | 37.00 | | mg/L | | 92 | 78 - 114 |

**Lab Sample ID: LCS 240-386211/26**
**Matrix: Water**
**Analysis Batch: 386211**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| HEM | 40.0 | 34.40 | | mg/L | | 86 | 78 - 114 |

**Lab Sample ID: 240-113550-1 MS**
**Matrix: Water**
**Analysis Batch: 386211**

**Client Sample ID: W-12610-053119-SSH-00319**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| HEM | 4.8 | U | 38.9 | 33.24 | | mg/L | | 85 | 78 - 114 |

## Method: 410.4 - COD

**Lab Sample ID: MB 240-384337/40**
**Matrix: Water**
**Analysis Batch: 384337**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | 10 | U | 10 | 4.1 | mg/L | | | 06/04/19 09:37 | 1 |

**Lab Sample ID: LCS 240-384337/41**
**Matrix: Water**
**Analysis Batch: 384337**

**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 | 68.4 | 68.9 | | mg/L | | 101 | 90 - 110 |

## Method: 4500 H+ B-2000 - pH

**Lab Sample ID: LCS 240-384045/2**
**Matrix: Water**
**Analysis Batch: 384045**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 6.79 | 6.8 | | SU | | 100 | 97 - 103 |

## Method: 4500 NH3 D-2011 - Ammonia

**Lab Sample ID: MB 240-386334/7**
**Matrix: Water**
**Analysis Batch: 386334**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.093 | mg/L | | | 06/14/19 14:49 | 1 |

**Lab Sample ID: LCS 240-386334/8**
**Matrix: Water**
**Analysis Batch: 386334**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 18.0 | 17.8 | | mg/L | | 99 | 85 - 114 |

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

**Lab Sample ID: SCB 240-384052/2**
**Matrix: Water**
**Analysis Batch: 384052**

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

| Analyte | SCB Result | SCB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 2.0 | U | 2.0 | 1.2 | mg/L | | | 06/01/19 13:36 | 1 |

**Lab Sample ID: USB 240-384052/1**
**Matrix: Water**
**Analysis Batch: 384052**

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

| Analyte | USB Result | USB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 2.0 | U | 2.0 | 1.2 | mg/L | | | 06/01/19 13:36 | 1 |

**Lab Sample ID: LCS 240-384052/3**
**Matrix: Water**
**Analysis Batch: 384052**

**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 | 185 | | mg/L | | 93 | 85 - 115 |

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

**Lab Sample ID: MB 240-384841/1**
**Matrix: Water**
**Analysis Batch: 384841**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 4.0 | U | 4.0 | 2.2 | mg/L | | | 06/06/19 10:01 | 1 |

**Lab Sample ID: LCS 240-384841/2**
**Matrix: Water**
**Analysis Batch: 384841**

**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 | 71.5 | 85.0 | | mg/L | | 119 | 64 - 120 |

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

Job ID: 240-113550-1

## Method: SM4500 P E-1999 - Phosphorus

**Lab Sample ID: MB 240-384110/3**
**Matrix: Water**
**Analysis Batch: 384110**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.10 | U | 0.10 | 0.037 | mg/L | | | 06/03/19 07:21 | 1 |

**Lab Sample ID: LCS 240-384110/4**
**Matrix: Water**
**Analysis Batch: 384110**

**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 | 0.405 | 0.394 | | mg/L | | 97 | 77 - 120 |

# Surrogate Summary

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

Job ID: 240-113550-1

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

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | BFB | DCA | TOL |
| Lab Sample ID | Client Sample ID | (69-120) | (61-138) | (73-120) |
| 240-113550-1 | W-12610-053119-SSH-00319 | 97 | 79 | 104 |
| LCS 240-384260/5 | Lab Control Sample | 100 | 82 | 100 |
| MB 240-384260/8 | Method Blank | 107 | 87 | 110 |

**Surrogate Legend**

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

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

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | DCBP2 | TCX2 |
| Lab Sample ID | Client Sample ID | (10-114) | (15-131) |
| 240-113550-1 | W-12610-053119-SSH-00319 | 80 | 78 |
| 240-113550-2 | W-12610-053119-SSH-00519 | 74 | 76 |
| LCS 240-384384/19-A | Lab Control Sample | 76 | 77 |
| MB 240-384384/18-A | Method Blank | 79 | 74 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

# Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-113550-1
Project/Site: 12610-T04, RACER Bay City

## Client Sample ID: W-12610-053119-SSH-00319
## Lab Sample ID: 240-113550-1

**Date Collected: 05/31/19 09:30**
**Matrix: Water**
**Date Received: 06/01/19 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 624 | | 1 | 384260 | 06/04/19 03:19 | TJL1 | TAL CAN |
| Total/NA | Prep | 608 | | | 384384 | 06/04/19 09:41 | CS | TAL CAN |
| Total/NA | Analysis | 608 | | 1 | 384531 | 06/05/19 16:26 | LSH | TAL CAN |
| Total Recoverable | Prep | 200.7 | | | 384126 | 06/03/19 14:00 | MBB | TAL CAN |
| Total Recoverable | Analysis | 200.7 Rev 4.4 | | 1 | 384578 | 06/04/19 19:04 | WKD | TAL CAN |
| Total/NA | Prep | 245.1 | | | 384127 | 06/03/19 14:00 | MBB | TAL CAN |
| Total/NA | Analysis | 245.1 | | 1 | 384688 | 06/05/19 15:37 | WKD | TAL CAN |
| Total/NA | Analysis | 1664A | | 1 | 386211 | 06/14/19 10:22 | AMT | TAL CAN |
| Total/NA | Analysis | 410.4 | | 1 | 384337 | 06/04/19 09:57 | TPH | TAL CAN |
| Total/NA | Analysis | 4500 H+ B-2000 | | 1 | 384045 | 06/01/19 12:23 | JWW | TAL CAN |
| Total/NA | Analysis | 4500 NH3 D-2011 | | 1 | 386334 | 06/14/19 17:53 | JWW | TAL CAN |
| Total/NA | Analysis | 5210B-2001 | | 1 | 384052 | 06/01/19 13:38 | JWW | TAL CAN |
| Total/NA | Analysis | SM 2540D | | 1 | 384841 | 06/06/19 10:01 | JESW | TAL CAN |
| Total/NA | Analysis | SM4500 P E-1999 | | 1 | 384110 | 06/03/19 09:13 | TPH | TAL CAN |

## Client Sample ID: W-12610-053119-SSH-00519
## Lab Sample ID: 240-113550-2

**Date Collected: 05/31/19 09:05**
**Matrix: Water**
**Date Received: 06/01/19 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 608 | | | 384384 | 06/04/19 09:41 | CS | TAL CAN |
| Total/NA | Analysis | 608 | | 1 | 384531 | 06/05/19 16:47 | LSH | TAL CAN |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-113550-1
Project/Site: 12610-T04, RACER Bay City

## Laboratory: Eurofins TestAmerica, Canton

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

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| California | State Program | 9 | 2927 | 02-23-20 |
| Connecticut | State Program | 1 | PH-0590 | 12-31-19 |
| Florida | NELAP | 4 | E87225 | 06-30-19 * |
| Illinois | NELAP | 5 | 200004 | 07-31-19 * |
| Iowa | State Program | 7 | 421 | 06-01-21 |
| Kansas | NELAP | 7 | E-10336 | 04-30-20 |
| Kentucky (UST) | State Program | 4 | 58 | 02-23-20 |
| Kentucky (WW) | State Program | 4 | 98016 | 12-31-19 |
| Minnesota | NELAP | 5 | 039-999-348 | 12-31-19 * |
| Minnesota (Petrofund) | State Program | 1 | 3506 | 07-31-19 * |
| Nevada | State Program | 9 | OH00048 | 07-31-19 |
| New Jersey | NELAP | 2 | OH001 | 06-30-19 * |
| New York | NELAP | 2 | 10975 | 03-31-20 |
| Ohio VAP | State Program | 5 | CL0024 | 06-05-21 |
| Oregon | NELAP | 10 | 4062 | 02-23-20 |
| Pennsylvania | NELAP | 3 | 68-00340 | 08-31-19 * |
| Texas | NELAP | 6 | T104704517-18-10 | 08-31-19 * |
| USDA | Federal | | P330-16-00404 | 12-28-19 |
| Virginia | NELAP | 3 | 460175 | 09-14-19 * |
| Washington | State Program | 10 | C971 | 01-12-20 * |
| West Virginia DEP | State Program | 3 | 210 | 12-31-19 |

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

3.6/C3.4

# Chain of Custody Record

318736

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

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

| Client Contact | Project Manager: JE Pardys | Site Contact: S Hovemeyer | Date: 5/31/19 | COC No: 318736 |
|---|---|---|---|---|
| Company Name: GHD | Tel/Fax: 519 340 4316 | Lab Contact: D. Heckler | Carrier: FedEx | 1 of 1 COCs |
| Address: 26850 Haggerty Rd | Analysis Turnaround Time | | | Sampler: S. Hovemeyer |
| City/State/Zip: Farmington Hills, MI | ☐ CALENDAR DAYS ☒ WORKING DAYS | | | For Lab Use Only: |
| Phone: 248 893 3400 | TAT if different from Below | | | Walk-in Client: |
| Fax: | ☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day | | | Lab Sampling: |
| Project Name: Racer Bay City | | | | Job / SDG No.: |
| Site: Lab # 240006288 | | | | |
| PO# Ref#12610-TO4 | | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | Select metals | Ammonia | COD | T. Phosphorus | vinyl chloride | PCBs | BOD | H+ - pH | TSS | HEM | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-12610-053119-SSH-00319 | 5/31/19 | 0930 | C, G | WT | 12 | N | N | X | X | X | X | X | X | X | X | X | X | |
| ~~TB-12610-053119-SSH-00419~~ | ~~1~~ | | G | TB | 1 | N | N | | | | | X | | | | | | ~~SSH~~ |
| W-12610-053119-SSH-00519 | 1 | 0905 | G | GW | 2 | N | N | | | | | | X | | | | | |

240-113550 Chain of Custody

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

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

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

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

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

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

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 865074, 865075 | Cooler Temp. (°C): Obs'd: | Corr'd: | Therm ID No.: |
|---|---|---|---|---|

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| | GHD | 5/31/19 1500 | | | 6-1-19 950 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |



6/17/2019

**TestAmerica Canton Sample Receipt Form/Narrative** **Login # : 113550**
**Canton Facility**

Client GHD Site Name

Cooler Received on 6-1-19 Opened on 6-1-19

Cooler unpacked by:

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

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

TestAmerica Cooler # NA Foam Box Client Cooler Box Other

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

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. 3.6 °C Corrected Cooler Temp. 3.4 °C
   IR GUN #36 (CF **+0.7**°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC984738**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes (No)
16. Was a LL Hg or Me Hg trip blank present? Yes (No)

**Tests that are not checked for pH by Receiving:**

**VOAs**
**Oil and Grease**
**TOC**

Contacted PM Date by via Verbal Voice Mail Other

Concerning

**17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES**

Samples processed by: MS

**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):

VOA Sample Preservation - Date/Time VOAs Frozen:

# Login Container Summary Report



Temperature readings: _____

| Client Sample ID | Lab ID | Container Type | Container pH | Preservative Added (mls) | Lot # |
|---|---|---|---|---|---|
| W-12610-053119-SSH-00319 | 240-113550-E-1 | Plastic 500ml - with Sulfuric Acid | <2 | _____ | _____ |
| W-12610-053119-SSH-00319 | 240-113550-F-1 | Plastic 500ml - with Nitric Acid | <2 | _____ | _____ |
| W-12610-053119-SSH-00319 | 240-113550-J-1 | Amber Glass 1 liter - Sulfuric Acid | _____ | _____ | _____ |
| W-12610-053119-SSH-00319 | 240-113550-K-1 | Amber Glass 1 liter - Sulfuric Acid | _____ | _____ | _____ |