

January 15, 2015

Reference No. 012610

Ms. Sue Kaelber-Matlock
Michigan Department of Environmental Quality
Remediation Division
Saginaw Bay District Office
401 Ketchum Street, Suite B
Bay City, Michigan 48708

Dear Ms. Kaelber-Matlock:

Re: 2014 Annual Technical Progress Report Submittal
RACER Trust Bay City Powertrain Industrial Lands

Enclosed is the 2014 Annual Technical Progress Report (Annual Report) for the Revitalizing Auto Communities Environmental Response Trust (RACER) Bay City Powertrain Industrial Lands (Site) located in Bay City, Michigan.

This Annual Report covers the RACER Site for the time period from November 16, 2013 through November 15, 2014, 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), interim response actions including, end-of-pipe treatment and recirculation implementation, 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.

1.0 Summary of On-Going Activities and Project Status

The following sections summarize the activities performed related to implementation of the RAP and interim response actions 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

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groundwater and storm water from the RACER Site. The construction of the facility was initiated in November 2012 and is expected to be fully commissioned early in 2015. New groundwater extraction pumps and associated well upgrades were completed as part of the new groundwater treatment system construction.

1.1.1 Operation and Maintenance Activities

An initial Operation, Maintenance, and Monitoring Plan (O&M Plan) was submitted in November 2000 to MDEQ. Revised O&M Plan sections were submitted to MDEQ in June 2001, conditionally approved by MDEQ on November 27, 2001, and the final O&M Plan was submitted in January 2002 and subsequently approved by MDEQ. Pursuant to this plan, O&M activities are being conducted. Additional O&M activities for the groundwater treatment system will be added to the existing O&M Plan following final commissioning of the treatment system which is expected early in 2015.

1.1.2 Operation and Maintenance Activities – Groundwater Extraction System

Table 1 presents Saginaw River water levels measured during the monthly inspections, as well as the corresponding daily, weekly, and monthly river water level averages from the United States Geological Survey (USGS) station – 04157060 Saginaw River at Midland Road in Bay City, Michigan. Extraction well details and water elevations are presented in Tables 2. Groundwater Monitoring well details and water elevations are presented in Table 3. Monthly maintenance activity checklists are presented in Attachment A.

Frequent interruptions to the MSA groundwater extraction system and the storm water management system were due to construction and commissioning of the groundwater treatment system and associated extraction system modifications during the 12-month period covered by this report, as documented in the monthly maintenance activity checklists. The groundwater treatment system operated sporadically during the 12-month period covered by this report. When the RACER groundwater treatment system was operational, the Crotty Street Channel (CSC) was dewatered through the operation of the pump in EW-15 due to the porous nature of the soils in the CSC. In addition, the Machine Storage Area (MSA) was dewatered through the operation of pumps in EW-6, EW-8, and EW12, which discharge to EW-15. The pump in EW-15 directed water to the RACER groundwater treatment system where the extracted water is treated before being discharged to the City of Bay City. When the groundwater treatment system was not operating the CSC was kept in a dewatered state by the operation of a sump pump in EW-14 which discharged extracted water to the GM LLC stormwater treatment system. In addition, the MSA was dewatered when the pumps were

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operated in EW-6, EW-8, and EW-12, which discharge to EW-15 and drain to EW-14 (due to the porous nature of soil in the CSC) where extracted water from the MSA was discharged to the GM LLC groundwater treatment system.

The EW-14 pump was inspected twice a month and cleaned as required.

1.1.3 Operation and Maintenance Activities – Groundwater Treatment System

Issues with the construction of the groundwater treatment system delayed the final commissioning of the groundwater treatment system. Through the year approximately 31,004 gallons of groundwater was treated and discharged to the City of Bay City under Industrial User Discharge Permit (120807) with the City of Bay City. The groundwater treatment system is expected to be fully commissioned early in 2015.

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) since 1977. Due to the unavailability of the data from the NOAA website, data was obtained from USGS station (04157065 Saginaw River at Weadock Road at Essexville, MI) and used for water elevation data of the Saginaw River, as of November 1, 2005. On December 4, 2013 USGS station 04157065 was removed from service so data was obtained from USGS station (04157060 Saginaw River at Midland Road at Bay City, MI) and used for water elevation data of the Saginaw River, as of November 16, 2013. USGS station 04157060 is approximately 1 mile upstream of the Site.

Based on the combined NOAA and USGS data from 1977 to November 15, 2014, the average Saginaw River water level is 578.85 feet (ft) above mean sea level (AMSL). Recent water levels were above the average, as the current water level at Midland Road measured on November 15, 2014 was 579.21 ft AMSL.

1.1.5 Groundwater Monitoring Activities

Table 4 presents the sample results for the MSA and CSC semi-annual extraction system discharge samples. The fourteenth annual ground water sampling event (August 2014) was also conducted during this reporting period. Table 5 presents the fourteenth annual groundwater sampling event analytical results summary. Table 6 presents the analytical results for the samples collected from the groundwater treatment system effluent during commissioning. Figure 1 presents the locations sampled for chemical analysis. Figure 2



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presents the location where groundwater and surface water elevations are monitored. Groundwater elevations are presented in Tables 2 and 3 for extraction wells and monitoring wells, respectively. Groundwater elevations collected on August 6, 2014 are presented on Figure 3.

A summary of the last 8 years of analytical groundwater data is presented in Attachment B. The laboratory data reports for all chemical analysis conducted in 2014 and data validation for the 2014 annual sampling event are presented in Attachment C.

1.2 Interim Response Actions

No Interim response actions are proposed at this time.

2.0 Proposed Modifications to Monitoring Program

RACER proposes to add the required semi-annual monitoring of effluent from the groundwater treatment system. Sampling will be completed in accordance with the Industrial User Discharge Permit with the City of Bay City (120807). The parameters to be analyzed will include: TSS, pH, grease/oil, phosphorous, COD, BOD, cadmium, chromium, copper, mercury, lead, nickel, silver, ammonia-nitrogen, PCBs, and vinyl chloride.

RACER proposes to remove staff gauge SG-1 (Crotty Street) from the water level monitoring program since it was recently damaged. In place of SG-1, RACER proposes to utilize USGS Station 04157060 which is located 1 mile upstream of the Site. A comparison of the historical USGS Station 04157065 water elevations (located approximately 2 miles downstream) and the proposed USGS Station 04157060 (located approximately 1 mile upstream) water elevations identified, on average, a difference of 0.2 ft. Therefore, utilizing USGS Station 04157060 for Saginaw River water elevations is accurate enough for the purposes we use the staff gauge for.

Table 7 presents a summary of the revised monitoring program.

3.0 Schedule

All activities have been completed within the required time frames.



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As part of the 2015 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 CSA and MSA extraction system samples (to be completed in April and August, 2015) and semi-annual effluent samples once the treatment system has been fully commissioned. The 2015 annual groundwater monitoring event will be completed in August 2015. Monitoring activities will be evaluated to identify ways to streamline and more efficiently complete necessary activity. Modifications will be proposed to MDEQ as appropriate.

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

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Michael R. Tomka, P.E.

DC/kf/11

Encl.

Figure 1	Chemical Analysis Monitoring Locations
Figure 2	Water Elevation Monitoring Locations
Figure 3	Shallow Groundwater Elevations – August 6, 2014
Table 1	Saginaw River Water Levels
Table 2	Groundwater Extraction System Water Elevations
Table 3	Monitoring Well Completion Details and Groundwater Elevations
Table 4	Analytical Results Summary – Extraction System Sampling
Table 5	Analytical Results Summary – Annual Sampling
Table 6	Analytical Results Summary – Groundwater Treatment System Effluent Sampling
Table 7	Summary of Long-Term Groundwater and Stormwater Monitoring Activities



**CONESTOGA-ROVERS
& ASSOCIATES**

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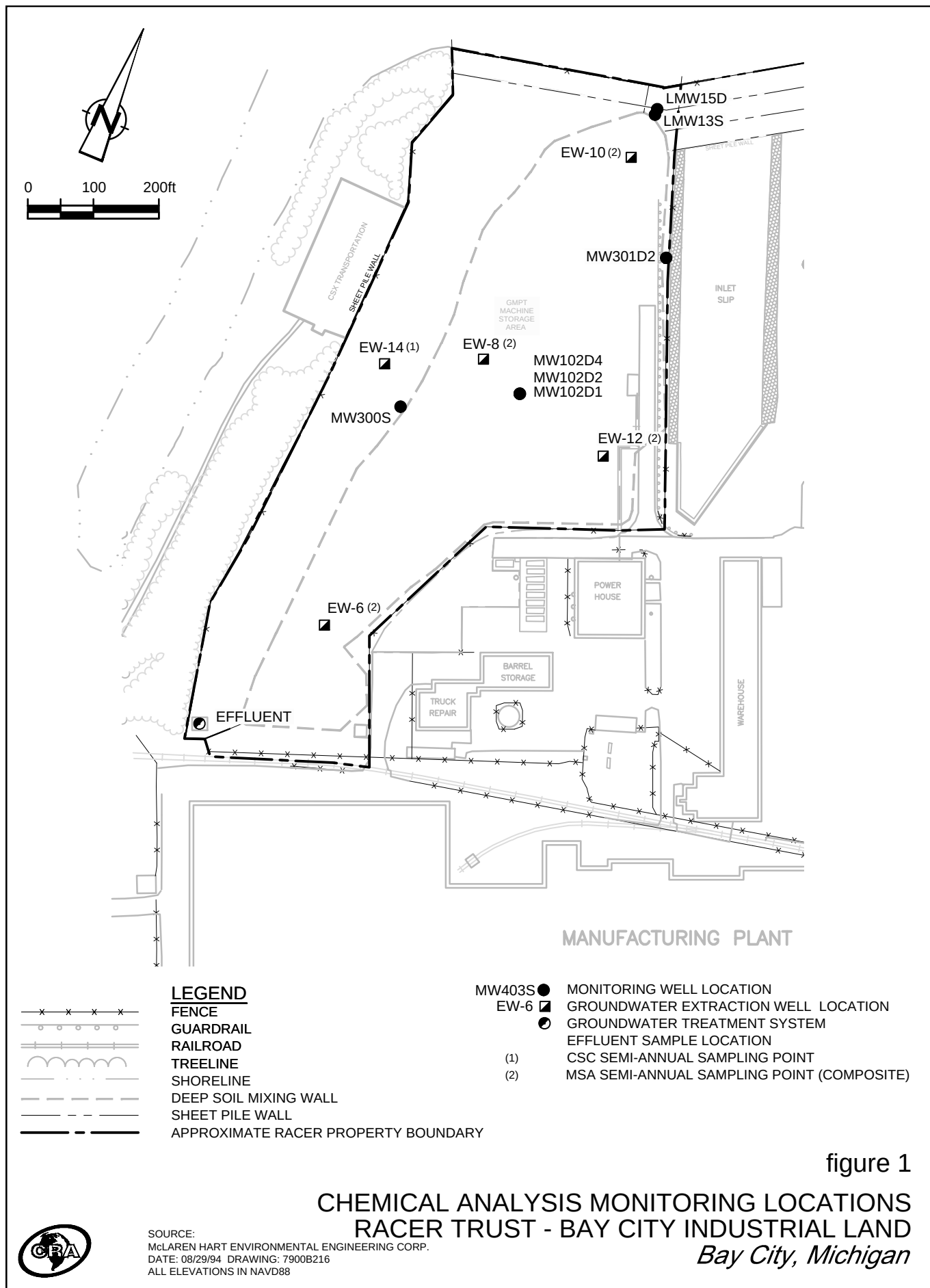
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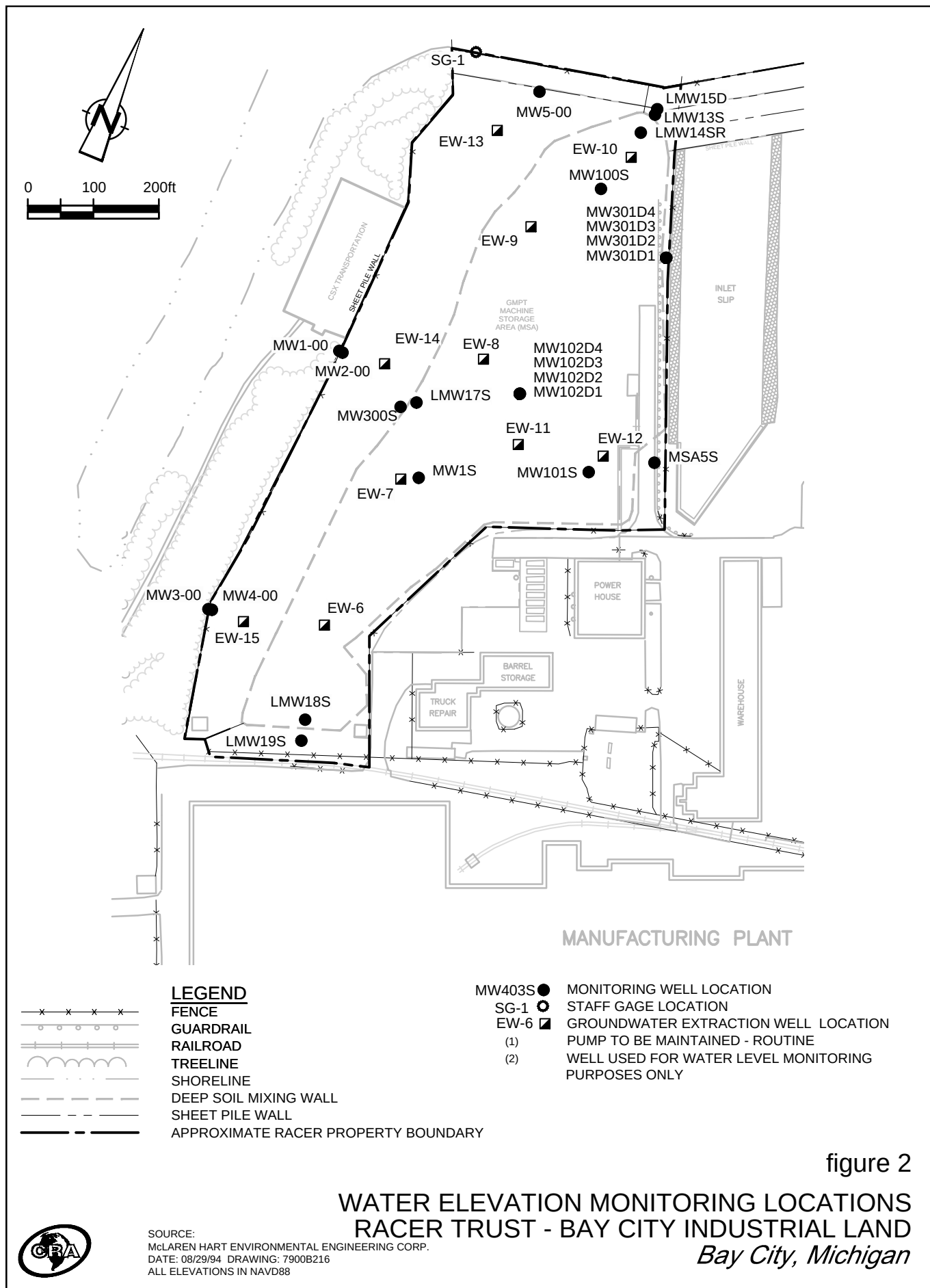
Attachment A Maintenance Activity Checklists

Attachment B Analytical Results Summary (2006 to 2014)

Attachment C Analytical Results and Reduced Validation – 2014 Annual Sampling Event

cc: John Leone, Esq. - Assistant Attorney General
Richard Finn, City of Bay City
Thomas McDowell, MDEQ
Grant Trigger, RACER Trust
Dave Favero, RACER Trust





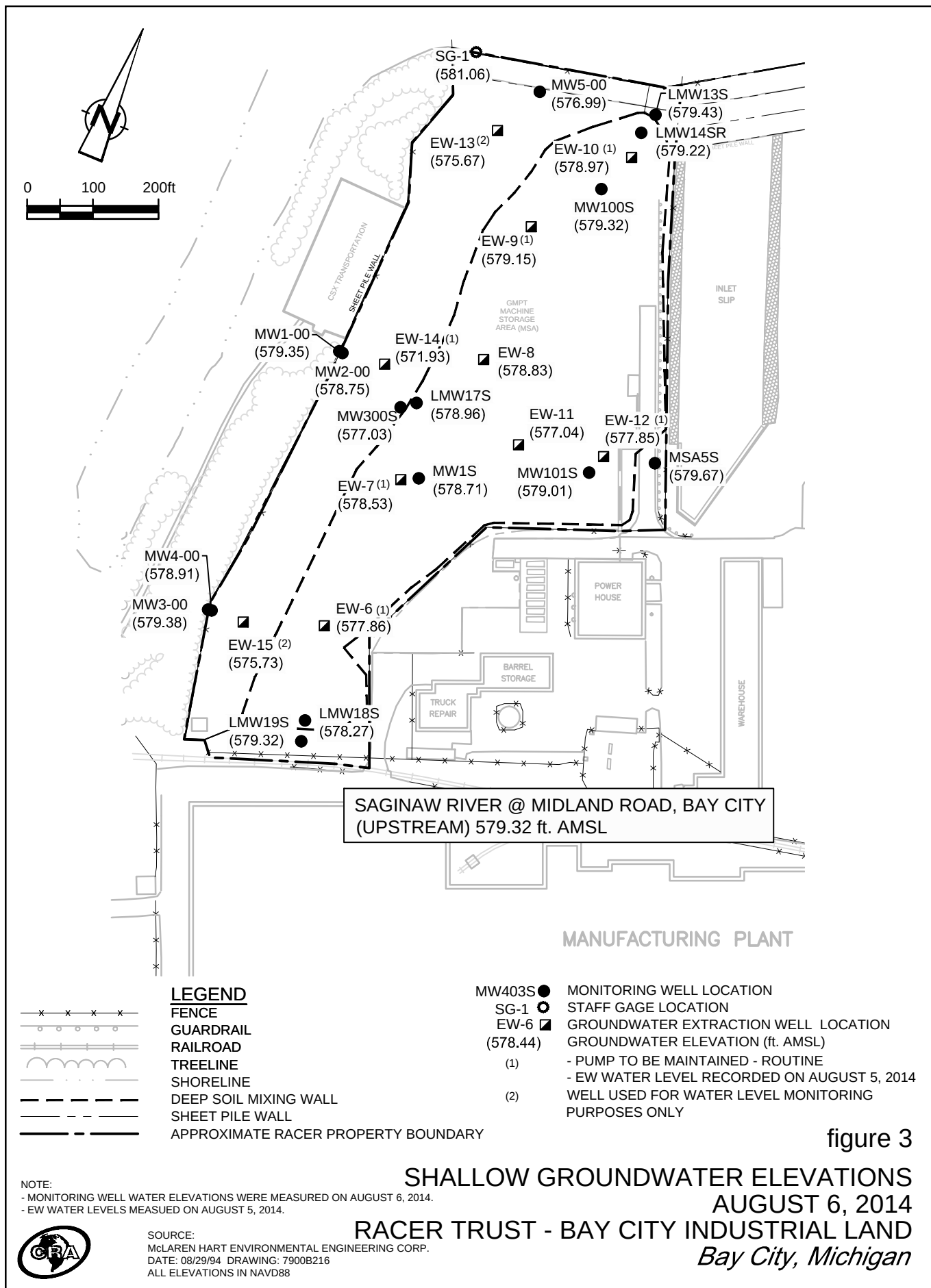


figure 3

SHALLOW GROUNDWATER ELEVATIONS AUGUST 6, 2014 RACER TRUST - BAY CITY INDUSTRIAL LAND Bay City, Michigan

TABLE 1

**SAGINAW RIVER WATER LEVELS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

<i>Location</i>	<i>6-Dec-13</i>	<i>23-Jan-14</i>	<i>13-Feb-14</i>	<i>20-Mar-14</i>	<i>24-Apr-14</i>	<i>5-May-14</i>	<i>27-Jun-14</i>	<i>28-Jul-14</i>	<i>5-Aug-14</i>	<i>30-Sep-14</i>	<i>16-Oct-14</i>	<i>26-Nov-14</i>
<u>Crotty Street Channel Containment Area</u>												
SG-1 - Saginaw River	Dry	snow/ice	snow/ice	snow/ice	Dry	580.32 ⁽²⁾	580.72 ⁽²⁾	581.08 ⁽²⁾	581.06 ⁽²⁾	581.28 ⁽²⁾	NM	damaged
USGS Station - Midland Road at Saginaw River in Bay City, MI ⁽¹⁾												
<i>Daily Average Water Level</i>	577.13	576.32	576.88	577.13	577.61	578.60	579.08	579.72	579.32	579.71	579.55	579.75
<i>Weekly Average Water Level</i>	576.73	576.69	576.81	577.24	577.59	578.53	578.99	579.30	579.28	579.42	579.46	579.28
<i>Monthly Average Water Level</i>	576.72	576.83	576.69	577.05	577.53	578.79	578.82	579.19	579.30	579.36	579.40	579.25

Notes:

- (1) Source of Saginaw River Elevation is USGS Station (04157060) Midland Road at Saginaw River, Bay City, MI. (Provisional USGS Data, Subject to Revision)
- (2) Saginaw River water elevation is higher than the USGS Station water elevation, which is likely a result of damage to the staff gauge from driftwood
- NM Not Measured

TABLE 2

**GROUNDWATER EXTRACTION SYSTEM WATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

<i>Extraction Well</i>	<i>Reference Elevation (ft AMSL)</i>	<i>Bottom of Well Elevation (ft AMSL)</i>	<i>Top ICU (ft AMSL)</i>	<i>Water Elevation (ft AMSL) Dec. 6, 2013</i>	<i>Water Elevation (ft AMSL) Jan. 23, 2014</i>	<i>Water Elevation (ft AMSL) Feb. 13, 2014</i>	<i>Water Elevation (ft AMSL) Mar. 20, 2014</i>	<i>Water Elevation (ft AMSL) Apr. 24, 2014</i>
Machine Storage Area								
EW-6	589.74	570.39	572.39	577.15	577.59	577.65	577.65	575.33
EW-7	587.99	571.14	571.64	578.55	(2)	578.56	578.7	578.56
EW-8	588.34	572.29	573.29	575.49	578.45	578.41	578.53	(1) (1) 581.65 (1)
EW-9	588.04	572.19	573.69	578.05	578.41	578.43	579.31	578.93
EW-10	587.77	570.82	572.32	577.86	(2)	577.8	577.9	578.18
EW-11	591.51	571.91	572.56	576.77	(1) (2)	576.65	(1) 576.66	(1) (1) 577 (1)
EW-12	586.42	571.57	573.07	578.53	578.07	(3)	577.97	(1) (1) 579.65 (1)
Crotty Street Channel Containment Area								
EW-13	584.33	571.86	NA	575.63	575.62	575.64	576.51	575.65
EW-14	582.42	569.92	NA	571.11	571.03	571.19	571.23	571.33
EW-15	583.71	571.61	NA	582.46	580.52	575.63	577.19	577.55

Notes:

- (1) Product identified in well
- (2) Equipment malfunction
- (3) Thick LNAPL, unable to obtain water level

TABLE 2

**GROUNDWATER EXTRACTION SYSTEM WATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

<i>Extraction Well</i>	<i>Reference Elevation (ft AMSL)</i>	<i>Bottom of Well Elevation (ft AMSL)</i>	<i>Top ICU (ft AMSL)</i>	<i>Water Elevation (ft AMSL) May 5, 2014</i>	<i>Water Elevation (ft AMSL) Jun. 27, 2014</i>	<i>Water Elevation (ft AMSL) Jul. 28, 2014</i>	<i>Water Elevation (ft AMSL) Aug. 5, 2014</i>	<i>Water Elevation (ft AMSL) Sept. 30, 2014</i>
<i>Machine Storage Area</i>								
EW-6	589.74	570.39	572.39	577.58	575.61	577.9	577.86	(2)
EW-7	587.99	571.14	571.64	578.6	578.60	578.6	578.53	579.51
EW-8	588.34	572.29	573.29	578.61	578.69	(1) 578.79	(1) 578.83	578.71
EW-9	588.04	572.19	573.69	578.85	578.96	579.13	579.15	579.33
EW-10	587.77	570.82	572.32	578.22	578.74	578.64	578.97	579.28
EW-11	591.51	571.91	572.56	577.33	577.16	(1) 577.07	(1) 577.04	(1) 576.88
EW-12	586.42	571.57	573.07	579.28	578.26	(1) 577.81	(1) 577.85	(1) 578.9
<i>Crotty Street Channel Containment Area</i>								
EW-13	584.33	571.86	NA	575.66	575.67	575.67	575.67	576.3
EW-14	582.42	569.92	NA	571.08	571.13	570.93	571.93	576.06
EW-15	583.71	571.61	NA	576.1	576.22	575.68	575.73	576.12

Notes:

- (1) Product identified in well
- (2) Equipment malfunction
- (3) Thick LNAPL, unable to obtain water level

TABLE 2

**GROUNDWATER EXTRACTION SYSTEM WATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

<i>Extraction Well</i>	<i>Reference Elevation (ft AMSL)</i>	<i>Bottom of Well Elevation (ft AMSL)</i>	<i>Top ICU (ft AMSL)</i>	<i>Water Elevation (ft AMSL) Oct. 16, 2014</i>	<i>Water Elevation (ft AMSL) Nov. 26, 2014</i>
<i>Machine Storage Area</i>					
EW-6	589.74	570.39	572.39	577.67	577.83
EW-7	587.99	571.14	571.64	578.6	578.56
EW-8	588.34	572.29	573.29	574.25	578.68
EW-9	588.04	572.19	573.69	579.31	579.05
EW-10	587.77	570.82	572.32	579.28	578.96
EW-11	591.51	571.91	572.56	576.9	(1) 576.85
EW-12	586.42	571.57	573.07	578.55	579.15
<i>Crotty Street Channel Containment Area</i>					
EW-13	584.33	571.86	NA	576.92	575.6
EW-14	582.42	569.92	NA	576.67	571.12
EW-15	583.71	571.61	NA	576.48	576.49

Notes:

- (1) Product identified in well
- (2) Equipment malfunction
- (3) Thick LNAPL, unable to obtain water level

TABLE 3

**MONITORING WELL COMPLETION DETAILS AND GROUNDWATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL)										
							8/6/2014	8/6/2013	8/7/2012	8/22/2011	8/16/2010	8/27/2009	8/19/2008	8/20/2007	8/16/2006	8/29/2005	8/24/2004
<u>Machine Storage Area (MSA)</u>																	
LMW13S	589.40	19.22	10	SS	PVC	2	579.43	578.61	578.19	578.03	578.71	579.31	578.21	577.67	578.23	578.14	579.40
LMW17S	589.31	19.83	10	SS	PVC	2	578.96	578.87	578.85	578.80	578.83	578.81	578.58	577.58	578.63	578.31	578.80
LMW18S	592.33	22.52	10	SS	PVC	2	578.27	577.93	577.82	577.61	577.66	577.99	577.62	578.13	578.00	578.23	578.45
LMW19S	588.61	19.32	10	SS	PVC	2	579.32	578.44	578.58	578.34	578.25	578.53	578.45	579.71	578.45	578.85	579.21
MW1S	591.08	12.95	2	SS	SS	2	578.71	578.80	578.65	578.65	578.68	579.71	580.93	578.48	n/a	577.58	578.63
MW100S	591.97	14.44	10	SS	SS	2	579.32	578.81	578.49	578.18	578.86	579.27	578.40	578.01	578.38	578.57	579.15
MW101S	593.34	19.22	10	SS	SS	2	579.01	579.10	578.94	578.80	578.93	578.78	578.49	578.39	578.31	577.95	578.82
MW102D1	594.86	30.99	10	SS	SS	2	579.39	578.34	577.90	578.71	578.39	579.42	578.83	578.04	578.30	578.30	579.02
MW102D2	594.93	36.21	10	SS	SS	2	579.38	578.31	577.89	578.69	578.37	579.40	578.93	578.03	578.25	578.33	579.01
MW102D3	594.91	46.74	10	SS	SS	2	579.35	578.27	577.84	578.67	579.34	579.41	578.89	577.98	578.25	578.31	578.98
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	579.30	578.24	577.79	578.63	578.29	579.33	578.76	577.98	578.22	578.25	578.94
MW300S	587.12	15.06	10	SS	SS	2	577.03	577.17	577.69	577.03	577.18	578.22	579.26	576.30	576.81	578.34	577.05
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	579.22	578.55	578.14	577.47	578.60	579.19	577.96	576.98	577.97	577.50	576.94
<u>Perimeter Banks (PB)</u>																	
LMW15D	588.34	32.8	10	SS	PVC	2	579.37	578.02	577.56	578.65	578.21	579.45	578.12	577.89	578.22	578.24	579.34
MW301D1	589.54	27.50	10	SS	SS	2	577.70	576.56	578.38	579.39	578.96	579.96	579.03	578.72	578.94	579.05	580.02
MW301D2	589.16	37.24	10	SS	SS	2	577.78	576.62	577.99	579.00	578.60	579.56	578.64	578.33	578.55	578.62	579.59
MW301D3	589.22	44.04	10	SS	SS	2	577.64	576.46	577.87	578.87	578.47	579.44	578.41	578.20	578.44	578.52	579.47
MW301D4	589.33	55.95	10	SS	SS	2	577.96	576.54	578.15	579.16	578.74	579.70	578.75	578.48	578.69	578.80	579.71
<u>Support Facilities Area (SFA)</u>																	
MSA5S	588.60	18.98			SS	2	579.67	580.22	578.58	578.67	579.10	580.10	578.04	580.10	579.28	579.76	580.57
<u>Crotty Street Channel</u>																	
MW1-00	588.26	12.00	7	SS	SS	2	579.35	577.71	576.44	577.17	577.13	578.95	578.74	577.11	576.92	577.09	578.37
MW2-00	589.29	18.00	7	SS	SS	2	578.75	577.79	576.62	577.29	577.26	578.40	578.83	577.09	576.97	577.23	577.50
MW3-00	588.40	12.50	7	SS	SS	2	579.38	577.67	576.47	577.25	577.14	579.01	578.74	577.19	576.94	577.13	578.51
MW4-00	589.65	19.00	7	SS	SS	2	578.91	577.90	576.76	577.41	577.38	578.55	578.95	577.21	577.07	577.34	577.59
MW5-00	588.89	13.00	7	SS	SS	2	576.99	577.00	576.73	576.77	576.95	578.04	578.82	576.55	576.72	577.85	576.91
SG-1	580.00	--	--	--	--	--	581.06	n/a	n/a	n/a	n/a	n/a	578.55	577.83	578.33	578.43	579.63
Saginaw River Elevation ⁽⁶⁾							579.32	577.02	576.71	577.53	577.41	578.34	577.97	577.09	577.41	578.32	578.52

Notes:

- (1) Approximate value
- (2) Lock Needs Replacing
- (3) Gage needs to be relocated
- (4) Could not open due to liner attachment
- (5) Could not read due to accumulation of snow and ice

(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to the present.

(7) Could not read due to well being covered with equipment

n/a Groundwater elevation not available

TABLE 3

**MONITORING WELL COMPLETION DETAILS AND GROUNDWATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL)												
							7/28/2003	8/26/2002	8/13/2001	3/19/2001	2/23/2001	1/24/2001	12/15/2000	11/30/2000	10/31/2000	9/11/2000	8/29/2000	7/18/2000	6/30/2000
<u>Machine Storage Area (MSA)</u>																			
LMW13S	589.40	19.22	10	SS	PVC	2	578.45	582.05	578.68	577.85	578.17	578.19	578.06	578.35	578.63	578.90	578.90	580.11	580.62
LMW17S	589.31	19.83	10	SS	PVC	2	582.73	578.91	578.68	578.74	578.83	579.06	578.79	579.17	578.93	579.24	579.20	579.09	579.85
LMW18S	592.33	22.52	10	SS	PVC	2	578.35	578.85	578.10	578.22	578.61	578.39	578.18	578.29	578.52	578.67	579.03	578.52	577.80
LMW19S	588.61	19.32	10	SS	PVC	2	579.24	579.93	578.79	579.56	579.96	579.59	(5)	579.56	579.38	579.34	580.13	579.45	580.56
MW1S	591.08	12.95	2	SS	SS	2	578.56	578.48	578.51	578.41	(5)	578.44	578.36	578.40	578.57	578.43	578.38	578.34	579.31
MW100S	591.97	14.44	10	SS	SS	2	577.27	578.91	578.93	578.36	578.64	578.87	578.65	579.05	579.33	579.57	579.66	579.85	578.03
MW101S	593.34	19.22	10	SS	SS	2	578.87	579.12	578.76	578.84	578.96	579.18	578.84	579.03	578.91	578.99	579.04	579.02	580.22
MW102D1	594.86	30.99	10	SS	SS	2	578.25	578.98	578.18	577.61	577.40	577.47	577.62	577.67	577.87	578.16	578.15	578.71	577.62
MW102D2	594.93	36.21	10	SS	SS	2	578.24	578.95	578.15	577.60	577.39	577.45	577.61	577.65	577.85	578.13	578.13	578.67	577.48
MW102D3	594.91	46.74	10	SS	SS	2	578.20	578.93	578.11	577.56	577.34	577.40	577.56	577.60	577.80	578.08	578.09	578.63	577.52
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	578.16	578.86	578.03	577.49	577.27	577.33	577.47	577.53	577.73	578.00	578.02	578.55	577.38
MW300S	587.12	15.06	10	SS	SS	2	577.77	578.53	577.00	578.84	578.67	578.99	578.07	578.84	578.27	578.16	578.24	n/a (2)	n/a (4)
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	578.13	578.45	578.23	577.38	577.77	577.88	577.54	578.04	578.13	578.16	578.21	579.19	579.32
<u>Perimeter Banks (PB)</u>																			
LMW15D	588.34	32.8	10	SS	PVC	2	578.04	578.83	578.06	577.37	577.12	577.22	577.33	577.48	577.63	577.94	578.03	578.43	n/a (4)
MW301D1	589.54	27.50	10	SS	SS	2	578.90	579.66	578.89	578.28	578.03	578.09	578.25	578.34	(5)	(5)	578.88	578.65	579.37
MW301D2	589.16	37.24	10	SS	SS	2	578.49	579.25	578.48	577.86	577.62	577.67	577.81	577.92	(5)	(5)	578.47	578.56	578.80
MW301D3	589.22	44.04	10	SS	SS	2	578.36	579.10	578.53	577.72	577.59	577.52	577.67	577.78	(5)	(5)	578.32	578.56	578.80
MW301D4	589.33	55.95	10	SS	SS	2	578.57	579.28	578.48	577.86	577.63	577.68	577.82	577.93	(5)	(5)	578.48	578.48	578.78
<u>Support Facilities Area (SFA)</u>																			
MSA5S	588.60	18.98			SS	2	580.55	580.65	579.74	580.65	580.42	580.62	580.46	580.65	580.34	580.56	580.41	581.32	581.17
<u>Crotty Street Channel</u>																			
MW1-00	588.26	12.00	7	SS	SS	2	577.78	578.44	576.72	578.61	578.14	577.81	577.49	577.75	577.45	577.36	577.60	577.71	579.57
MW2-00	589.29	18.00	7	SS	SS	2	577.60	578.03	576.76	578.69	578.26	577.82	577.51	577.77	577.45	577.36	577.59	577.65	578.67
MW3-00	588.40	12.50	7	SS	SS	2	577.77	578.38	576.70	578.62	578.26	577.79	577.48	577.74	577.45	577.37	577.60	578.68	578.46
MW4-00	589.65	19.00	7	SS	SS	2	577.68	578.07	576.79	578.67	578.30	577.84	577.51	577.78	577.47	577.34	577.57	577.62	578.87
MW5-00	588.89	13.00	7	SS	SS	2	576.28	576.72	577.02	577.06	577.86	576.97	576.91	576.90	577.31	577.91	578.01	n/a (4)	n/a (4)
SG-1	580.00	--	--	--	--	--	577.93	578.73	578.12	(5)	(5)	(5)	(5)	577.33	577.43	577.93	578.05	Destroyed (3)	Destroyed (3)
Saginaw River Elevation ⁽⁶⁾							576.83	578.50	577.91	576.80	576.74	576.77	576.78	577.02	577.23	577.49	577.76	578.27	577.81

Notes:

- (1) Approximate value
- (2) Lock Needs Replacing
- (3) Gage needs to be relocated
- (4) Could not open due to liner attachment
- (5) Could not read due to accumulation of snow and ice

(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to the present.

(7) Could not read due to well being covered with equipment

n/a Groundwater elevation not available

TABLE 3

**MONITORING WELL COMPLETION DETAILS AND GROUNDWATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

Well Location	Top of Riser Elevation (ft AMSL)	Depth of Well (feet)	Screen Length (feet)	Screen Type	Riser Type	Diameter of Screen (inches)	Groundwater Elevation (feet AMSL)													
							5/30/2000	4/26/2000	3/29/2000	2/28/2000	2/2/2000	1/4/2000	11/24/1999	10/25/1999	9/27/1999	9/7/1999	7/20/1999	6/22/1999	5/20/1999	4/20/1999
<u>Machine Storage Area (MSA)</u>																				
LMW13S	589.40	19.22	10	SS	PVC	2	581.63	581.81	581.27	581.74	579.27	580.08	580.68	581.26	580.55	580.02	579.68	579.23	581.42	582.65
LMW17S	589.31	19.83	10	SS	PVC	2	580.06	580.19	579.91	579.96	579.08	579.47	579.71	579.69	578.98	579.19	579.43	579.65	579.77	580.25
LMW18S	592.33	22.52	10	SS	PVC	2	578.10	578.09	577.66	577.80	577.09	577.37	577.32	577.62	577.51	577.89	579.57	579.45	579.39	579.78
LMW19S	588.61	19.32	10	SS	PVC	2	580.96	581.25	580.73	581.39	579.70	580.30	579.58	579.95	579.53	580.01	580.42	580.52	580.51	580.94
MW1S	591.08	12.95	2	SS	SS	2	579.26	579.29	579.28	579.18	579.05	579.07	579.15	579.11	578.51	578.58	--	578.64	579.29	579.49
MW100S	591.97	14.44	10	SS	SS	2	577.79	577.07	576.87	576.69	577.09	577.49	578.09	578.77	578.57	--	579.33	579.07	579.30	579.96
MW101S	593.34	19.22	10	SS	SS	2	580.39	580.14	579.21	579.86	579.61	579.61	579.65	579.81	579.04	579.18	578.83	578.71	579.19	580.44
MW102D1	594.86	30.99	10	SS	SS	2	577.70	577.60	577.25	577.23	576.81	576.80	576.38	577.47	577.64	578.29	579.69	576.82	579.27	579.34
MW102D2	594.93	36.21	10	SS	SS	2	577.58	577.44	577.12	577.08	576.80	576.67	576.24	577.33	577.50	578.15	579.68	576.78	579.34	579.39
MW102D3	594.91	46.74	10	SS	SS	2	577.59	577.47	577.16	577.12	576.88	576.71	576.26	577.35	577.55	578.20	579.66	576.80	579.25	579.35
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	577.45	577.34	577.01	576.98	575.70	576.56	576.12	577.21	577.40	578.05	579.56	576.70	579.13	579.21
MW300S	587.12	15.06	10	SS	SS	2	579.89	580.18	579.73	No Access	578.55	579.27	579.91	578.87	578.90	579.33	579.69	579.95	579.51	579.86
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	579.22	578.91	578.99	578.55	578.58	Damaged	Damaged	578.58	578.30	578.88	579.97	578.55	580.40	581.12
<u>Perimeter Banks (PB)</u>																				
LMW15D	588.34	32.8	10	SS	PVC	2	578.88	578.74	578.56	578.56	578.23	577.95	577.18	578.49	578.93	579.81	579.68	577.88	579.21	579.23
MW301D1	589.54	27.50	10	SS	SS	2	578.80	578.85	578.59	578.56	578.28	578.05	577.42	578.63	578.99	579.67	579.73	575.75	579.22	579.32
MW301D2	589.16	37.24	10	SS	SS	2	578.89	578.77	578.54	578.51	578.22	577.99	577.35	578.57	578.93	579.62	579.69	576.11	579.19	579.28
MW301D3	589.22	44.04	10	SS	SS	2	578.85	578.74	578.49	578.48	578.18	577.96	577.32	578.54	578.90	579.59	579.65	576.13	579.18	579.25
MW301D4	589.33	55.95	10	SS	SS	2	578.76	578.69	578.45	578.43	578.14	577.90	577.27	578.47	578.85	579.52	579.62	576.08	579.17	579.26
<u>Support Facilities Area (SFA)</u>																				
MSA5S	588.60	18.98			SS	2	582.22	582.37	580.62	582.13	580.96	581.42	581.70	581.77	581.74	581.84	579.38	577.24	579.71	580.83
<u>Crotty Street Channel</u>																				
MW1-00	588.26	12.00	7	SS	SS	2	578.68	578.42	578.04	578.89	577.89	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	Not Accessible	577.65	577.26	578.11	579.11	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	579.05	578.79	578.40	579.25	578.27	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	Not Accessible	577.60	577.18	578.03	577.03	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	579.12	578.86	578.66	578.36	577.63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SG-1	580.00	--	--	--	--	--	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed
Saginaw River Elevation ⁽⁶⁾							577.48	577.42	577.37	577.24	577.14	577.15	576.54	577.35	578.04	578.59	578.87	578.51	578.37	578.32

Notes:

- (1) Approximate value
- (2) Lock Needs Replacing
- (3) Gage needs to be relocated
- (4) Could not open due to liner attachment
- (5) Could not read due to accumulation of snow and ice

(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to the present.

(7) Could not read due to well being covered with equipment

n/a Groundwater elevation not available

TABLE 3
MONITORING WELL COMPLETION DETAILS AND GROUNDWATER ELEVATIONS
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

<i>Well Location</i>	<i>Top of Riser Elevation (ft AMSL)</i>	<i>Depth of Well (feet)</i>	<i>Screen Length (feet)</i>	<i>Screen Type</i>	<i>Riser Type</i>	<i>Diameter of Screen (inches)</i>	<i>3/19/1999</i>	<i>3/8/1999</i>
<u>Machine Storage Area (MSA)</u>								
LMW13S	589.40	19.22	10	SS	PVC	2	583.17	582.56
LMW17S	589.31	19.83	10	SS	PVC	2	581.57	581.58
LMW18S	592.33	22.52	10	SS	PVC	2	579.44	579.44
LMW19S	588.61	19.32	10	SS	PVC	2	580.90	580.66
MW1S	591.08	12.95	2	SS	SS	2	584.35	584.12
MW100S	591.97	14.44	10	SS	SS	2	582.53	582.71
MW101S	593.34	19.22	10	SS	SS	2	586.50	586.44
MW102D1	594.86	30.99	10	SS	SS	2	582.38	582.32
MW102D2	594.93	36.21	10	SS	SS	2	582.03	581.93
MW102D3	594.91	46.74	10	SS	SS	2	581.92	581.84
MW102D4 (replacement)	594.90	56.85	10	SS	SS	2	581.54	581.45
MW300S	587.12	15.06	10	SS	SS	2	579.37	579.51
LMW14SR (Replaced LMW14S Jan/00)	589.01	13.00	7	SS	SS	2	582.10	582.11
<u>Perimeter Banks (PB)</u>								
LMW15D	588.34	32.8	10	SS	PVC	2	579.86	579.71
MW301D1	589.54	27.50	10	SS	SS	2	579.40	579.29
MW301D2	589.16	37.24	10	SS	SS	2	579.35	579.23
MW301D3	589.22	44.04	10	SS	SS	2	579.38	579.23
MW301D4	589.33	55.95	10	SS	SS	2	579.37	579.18
<u>Support Facilities Area (SFA)</u>								
MSA5S	588.60	18.98			SS	2	580.33	580.54
<u>Crotty Street Channel</u>								
MW1-00	588.26	12.00	7	SS	SS	2	n/a	n/a
MW2-00	589.29	18.00	7	SS	SS	2	n/a	n/a
MW3-00	588.40	12.50	7	SS	SS	2	n/a	n/a
MW4-00	589.65	19.00	7	SS	SS	2	n/a	n/a
MW5-00	588.89	13.00	7	SS	SS	2	n/a	n/a
SG-1	580.00	--	--	--	--	--	Destroyed	Destroyed
Saginaw River Elevation ⁽⁶⁾							578.55	578.34

Notes:

- (1) Approximate value
- (2) Lock Needs Replacing
- (3) Gage needs to be relocated
- (4) Could not open due to liner attachment
- (5) Could not read due to accumulation of snow and ice

(6) Source of Saginaw River Elevation is: NOAA (Essexville, MI) for prior to November 1, 2005, USGS Station (04157065) for November 1, 2005 to December 4, 2013 and USGS Station (04157060) for December 4, 2013 to the present.

(7) Could not read due to well being covered with equipment

n/a Groundwater elevation not available

TABLE 4

ANALYTICAL RESULTS SUMMARY
EXTRACTION SYSTEM SAMPLING
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

AOI:		Crotty Street Channel		Machine Storage Area		Crotty Street Channel		Machine Storage Area	
Sample Location:		CSA GW Ext. Sys. Discharge		MSA GW Ext. Sys. Discharge		CSA GW Ext. Sys. Discharge		MSA GW Ext. Sys. Discharge	
Sample ID:		GW-12610-080514-SSH-1402		GW-12610-080514-SSH-1401		W-12610-122914-SSH-1420		W-12610-122914-SSH-1422	
Sample Date:		8/5/2014		8/5/2014		12/29/2014		12/29/2014	
Parameters:		Units	Michigan Residential Drinking water criteria						
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.5	0.19 U	0.19 U	0.20 U	0.19 U			
Aroclor-1221 (PCB-1221)	µg/L	0.5	0.19 U	0.19 U	0.20 U	0.19 U			
Aroclor-1232 (PCB-1232)	µg/L	0.5	0.19 U	0.19 U	0.20 U	0.19 U			
Aroclor-1242 (PCB-1242)	µg/L	0.5	0.68J	0.19 U	0.22	0.19 U			
Aroclor-1248 (PCB-1248)	µg/L	0.5	0.19 U	0.19 U	0.20 U	0.19 U			
Aroclor-1254 (PCB-1254)	µg/L	0.5	0.19 U	R	0.20 U	0.19 U			
Aroclor-1260 (PCB-1260)	µg/L	0.5	0.19 U	R	0.20 U	0.19 U			

Notes:

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

AOI:	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:	MW102D1	MW102D2	MW102D4	MW102D4
Sample ID:	GW-12610-080614-SSH-1403	GW-12610-080614-SSH-1404	GW-12610-080614-SSH-1405	GW-12610-080614-SSH-1406
Sample Date:	8/6/2014	8/6/2014	8/6/2014	8/6/2014 (Duplicate)

Polychlorinated Biphenyls

Aroclor-1016 (PCB-1016)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.5	0.41 J	0.13 J	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U

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

AOI:	Machine Storage Area	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:	MW300S	LMW13S	LMW15D	MW301D2
Sample ID:	GW-12610-080614-SSH-1407	GW-12610-080614-SSH-1408	GW-12610-080614-SSH-1409	GW-12610-080614-SSH-1410
Sample Date:	8/6/2014	8/6/2014	8/6/2014	8/6/2014

Polychlorinated Biphenyls

Aroclor-1016 (PCB-1016)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.5	0.1 J	0.19 U	0.065 J	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.5	0.19 U	1.0	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.5	0.19 U	0.19 U	0.19 U	0.19 U

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

ANALYTICAL RESULTS SUMMARY
GROUNDWATER TREATMENT SYSTEM EFFLUENT SAMPLING
RACER TRUST - BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

Sample Location: Sample ID: Sample Date:	Effluent W-12610-022614-1403 2/26/2014	Effluent W-12610-090514-SSH-1411 9/5/2014
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Parameters:	Units	Industrial User Discharge		
		Permit Limits (Daily)		
Metals				
Cadmium	ug/L	57	2.0 U	2.0 U
Chromium	ug/L	6812	5.0 U	5.0 U
Copper	ug/L	1476	20 U	21
Iron	ug/L	--	180	540
Lead	ug/L	632	3.0 U	3.0 U
Mercury	ug/L	non-detect	0.20 U	0.20 U
Nickel	ug/L	2548	7.8 J	20 U
Silver	ug/L	200	5.0 U	5.0 U
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	µg/L	non-detect	0.098 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	non-detect	0.098 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	non-detect	0.098 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	non-detect	0.098 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	non-detect	0.098 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	non-detect	0.098 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	non-detect	0.098 U	0.095 U
Volatile Organic Compounds				
Vinyl chloride	ug/L	2	1.0 U	1.0 U
General Chemistry				
Oil and grease	mg/L	100	1.7 J	4.9 U
Ammonia (as N)	mg/L	30	6.7	2.0 U
COD	mg/L	1670	10 U	10 U
pH		--	8.09	7.38
BOD	mg/L	835	2.3	2.0 U
TSS	mg/L	1336	4.0	4.0 U
Total Phosphorus	mg/L	13.8	0.20	0.10 U

Notes:

J Estimated concentration.

U Not present at or above the associated value.

1.0 Exceedance of criteria

TABLE 7

SUMMARY OF LONG-TERM GROUNDWATER AND STORMWATER MONITORING ACTIVITIES
RACER TRUST - BAY CITY SITE
BAY CITY, MICHIGAN

Plant Area	Location	Original Program 2001 - 2008			Revision 2009-2010			Revision 2011			2012			2013 - 2014			2015		
		Groundwater		Static Water	Groundwater		Static Water	Groundwater		Static Water	Groundwater		Static Water	Groundwater		Static Water	Groundwater		Static Water
		Quality Monitoring		Level Monitoring (1)	Quality Monitoring		Level Monitoring (1)	Quality Monitoring		Level Monitoring (1)	Quality Monitoring		Level Monitoring (1)	Quality Monitoring		Level Monitoring (1)	Quality Monitoring		Level Monitoring (1)
		Parameters	Frequency	Frequency	Parameters	Frequency	Frequency	Parameters	Frequency	Frequency	Parameters	Frequency	Frequency	Parameters	Frequency	Frequency	Parameters	Frequency	Frequency
Machine Storage Area (MSA)																			
MSA	LMW17S	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	LMW18S (3)	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	LMW19S	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	MW1S (3)	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	MW100S (3)	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	MW101S (3)	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	MW102D1	PCBs	annually	annually	PCBs	annually	annually	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	PCBs	annually	annually	PCBs	annually	annually
MSA	MW102D3	PCBs	annually	annually	PCBs	annually	annually		--	annually	--	--	annually	--	--	annually	--	--	annually
MSA	MW102D4	PCBs	annually	annually	PCBs	annually	annually	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	PCBs	annually	annually	PCBs	annually	annually
MSA	LMW14S	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
Perimeter Banks (PB)																			
PB	LMW13S	PCBs	annually	annually	PCBs	annually	annually	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	PCBs	annually	annually	PCBs	annually	annually
PB	MW301D1	PCBs	annually	annually	PCBs	annually	annually		--	annually	--	--	annually	--	--	annually	--	--	annually
PB	MW301D2	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually	PCBs	annually	annually
PB	MW301D3	PCBs	annually	annually	PCBs	annually	annually		--	annually	--	--	annually	--	--	annually	--	--	annually
PB	MW301D4	PCBs	annually	annually	PCBs	annually	annually		--	annually	--	--	annually	--	--	annually	--	--	annually
Support Facilities Area (SFA)																			
SFA	MSA5S	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
Crotty Street Channel (CSC)																			
CSC	MW1	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
CSC	MW2	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
CSC	MW3	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
CSC	MW4	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
CSC	MW5	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually
CSC	SG-1 (2)	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	annually	--	--	
Stormwater System(3)																			
MSA(5)	Extraction System	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--
CSC(5)	Extraction System	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--	PCBs	Semi-annually	--
CSC(5)	CB2	PCBs	Semi-annually	--	PCBs	Semi-annually	--		--	--	--	--	--	--	--	--	--	--	--
CSC(5)	Effluent																(7)	Semi-annually	--

Notes:

- (1) 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.
- (2) Staff gauge.
- (3) Extraction system monitoring.
- (4) To be sampled by plant personnel.
- (5) To be sampled by company who maintains the extraction system.
- (6) Monitoring conducted by GM LLC
- (7) Sampling in accordance with the Industrial User Discharge Permit with the City of Bay City (120807). Parameters include: TSS, pH, grease/oil, phosphorous, COD, BOD, cadmium, chromium, copper, mercury, lead, nickel, silver, ammonia-nitrogen, PCBs, and vinyl chloride
- Changes made to monitoring program

Attachment A

Monthly Activity Checklists

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Hoeseneger	12/6/13	recorded in	field book
Site Log Book	Monthly			11	11
Extraction Well Water Levels	Monthly			collected	
Inspection	Monthly			EW6+8+12	shutdown
Maintenance	Monthly - As Required			check hoses	
Level Transmitter Inspection	Monthly				
Maintenance	Monthly - As Required				
Calibration	Semi-Annually				
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none required	
Air Supply Manifold Inspection	Monthly			not used	
Air Compressor Maintenance	Monthly - As Required			not used	
Heater Check	Monthly (Winter Season)			"on"	
Maintenance	Monthly - As Required			none at this time	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	12/16	annual in Aug	
Water Levels	As required			LI LI	
General Maintenance	As required				
Force Main Cleaning	As required			Inspect GW Treatment system	
Flowmeter Cleaning	As required			as required by pressure buildup	
Spare Parts Inventory	As used				
Staff Gauges	As Required			peristaltic pumps - adequate hose supply	
Water Levels	Monthly			collected	
Exposure Barriers	Monthly			no excavations	
Multi-Layer Cap	Monthly			vegetation brown - watch for erosion	
Containment System	Monthly			minor cracks at cap wells - watch tie rod	
Stormwater Collection System	Monthly			OK - normal flows	
Crotty Street Channel	Monthly			holding altho more water than normal	
Abandoned 60" Sewer					

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

				NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
MACHINE STORAGE AREA				SH	12/1					shut off
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74			12.59						
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									no pump
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00			9.44						
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									shut off
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34			12.85						
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									no pump
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.94			9.49						
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									no pump
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 13.77			9.91						
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									13.76/14.74 LNAPL/H;
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									drops of product on DTW meter
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42			7.99						
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
PQIT-01	FLOW (gpm)			/						
	TOTAL (gal.)			/						
LT-01				on						
CP-01				/						
AIR SUPPLY MANIFOLD				"on"						
HEATER										
DATE OF LAST SWABBING										

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

EW#	CROTTY STREET CHANNEL	NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)	SSA	12/16					
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 7.33		8.70					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 5.42		11.31					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 6.71		1.25					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FOIT-09	FLOW (gpm)							
	TOTAL (gal)							
FEATER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)		1.88	thin ice				
	INLET RIVER - WATER LEVEL (ft)			on 6m property				
	CROTTY STREET - WATER LEVEL (ft)		dry					

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Page 1 of 4

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Hovsemeyer	1/23/14	field book	
Site Log Book	Monthly			field book	
Extraction Well Water Levels	Monthly			collected	
Inspection	Monthly				
Maintenance	Monthly - As Required			new pumps in EW 6, 8, 12 + 15	
				EW 15 out for service (pump)	
Level Transmitter Inspection	Monthly				
Maintenance	Monthly - As Required				
Calibration	Semi-Annually				
Control Panel Inspection	Monthly				
Maintenance	Monthly - As Required			OK	
				none required at this time	
Air Supply Manifold Inspection	Monthly			turned "off" by GM	
Air Compressor Maintenance	Monthly - As Required			NA	
Heater Check	Monthly (Winter Season)			heaters in EW 6, 8, 12 + 15 - "on"	
Maintenance	Monthly - As Required			none at this time	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	S. Hoevenmeyer	1/23/11	annual in Aug	
Water Levels	As required			" "	
General Maintenance	As required				
Force Main Cleaning	As required			commissioning GW Treatment system	
Flowmeter Cleaning	As required			inspect + clean as necessary in spring	
Spare Parts Inventory	As used				
Staff Gauges	As Required			new GW Treatment system - only hoses & fittings	
Water Levels	Monthly			snow + ice	
Exposure Barriers	Monthly			vegetation snow cover - no excavations	
Multi-Layer Cap	Monthly			snow + ice - appears OK	
Containment System	Monthly			shut pile wall has minor cracks at well's	
Stormwater Collection System	Monthly			frozen - very little H ₂ O	
Crotty Street Channel	Monthly			manhole lid gone	
Abandoned 60" Sewer					

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

EW#	MACHINE STORAGE AREA	NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)	SSH	11/23/19					new pump
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74		12.15					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							meter broke
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00							
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							new pump
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34		9.89					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.04		9.63					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							meter broke
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 10.77							
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							product normally in well - no interface probe - did not take AFW
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51							
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							new pump
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42		8.35					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-01	FLOW (gpm)							no longer in use EW-6, 8, 12, 15
	TOTAL (gal.)							
LT-01								
CP-01								
AIR SUPPLY MANIFOLD								
HEATER								

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	SSH	1/23/14					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 7.33	8.71						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 5.42	11.39						still using sump pump
	PUMP CHANGED (Y/N)							until GW system is
	CHLORINE ADDED							completely commissioned
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 6.71	3.19						EW-15 is where new
	PUMP CHANGED (Y/N)							GW system will pump
	CHLORINE ADDED							from to treatment
FQIT-03	FLOW (gpm)							
	TOTAL (gal.)							
HEATER								
DATE OF LAST SWABBING		only in EW-15						
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)							snow + ice

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Hoenemeyer	2/17/14	use of field book	when onsite
Site Log Book	Monthly			LL	LL
Extraction Well Water Levels	Monthly			collected	
Inspection	Monthly			pumps in 6, 8, 12 + 15	
Maintenance	Monthly - As Required			EWIS pump out	for repair
Level Transmitter Inspection	Monthly				
Maintenance	Monthly - As Required				
Calibration	Semi-Annually				
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none at this time	
Air Supply Manifold Inspection	Monthly				no air required
Air Compressor Maintenance	Monthly - As Required				NA
Heater Check	Monthly (Winter Season)			"on" in 6, 8, 12 + 15	
Maintenance	Monthly - As Required			not at this time	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	2/17/14	Annual in Aug.	
Water Levels	As required			Annual in Aug.	
General Maintenance	As required			Shovel snow from around bldg.	
Force Main Cleaning	As required			Schedule for spring	
Flowmeter Cleaning	As required			new one in bldg - as necessary	
Spare Parts Inventory	As used			replacement hoses on site - new pumps	
Staff Gauges	As Required			only need hoses	
Water Levels	Monthly			snow + ice	
Exposure Barriers	Monthly			site is all snow + ice	
Multi-Layer Cap	Monthly			snow covered - appears OK - no excavation	
Containment System	Monthly			sheet pile wall has minor cracks at welds on cap	
Stormwater Collection System	Monthly			mainly ice	
Crotty Street Channel	Monthly			covered in snow + ice	
Abandoned 60" Sewer					

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
CROTTY STREET CHANNEL		SSH	12/17					
BW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 7.33	8.69						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 5.42	11.23						surp pump
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
BW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 6.71	8.08						out for repair
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)							
	TOTAL (gal.)							
HEATER								
DATE OF LAST SWABBING								winter season
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)							snaw + ice

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Hoesemeyer	3/20/14	recorded in field book when onsite	
Site Log Book	Monthly				
Extraction Well Water Levels	Monthly			collected	
Inspection	Monthly			6, 8 + 12 running	EW 15 feeding treatment system
Maintenance	Monthly - As Required			adjust flow rates	
Level Transmitter Inspection	Monthly			local controls in	EW 6, 8, 12 + 15
Maintenance	Monthly - As Required			none required	
Calibration	Semi-Annually				
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none required	
Air Supply Manifold Inspection	Monthly				
Air Compressor Maintenance	Monthly - As Required				
Heater Check	Monthly (Winter Season)			"on" still winter	
Maintenance	Monthly - As Required			none required	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	3/20/14	annual in August	
Water Levels	As required			" "	
General Maintenance	As required			shovel snow away from bldg + EWS	
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			only on treatment system	
Spare Parts Inventory	As used			extra hose onsite	
Staff Gauges Water Levels	As Required			collected	
Exposure Barriers	Monthly			snow + ice covered	
Multi-Layer Cap	Monthly			no excavations	
Containment System	Monthly			minor cracks at welds on cap	
Stormwater Collection System	Monthly			flowing a little from snow melt	
Crotty Street Channel Abandoned 60" Sewer	Monthly			ice covered	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

MACHINE STORAGE AREA		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#		SSH	3/20					
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74	12.09						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00	9.29						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34	9.81						drops of LNAPL on probe
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.04	8.73						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 10.77	9.87						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51							LNAPL / H ₂ O
	PUMP CHANGED (Y/N)							13.57 / 14.76
	CHLORINE ADDED							
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42							7.17 / 7.27
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-01	FLOW (gpm)							
	TOTAL (gal.)							
LT-01								
CP-01								
AIR SUPPLY MANIFOLD								
HEATER								
DATE OF LAST SWABBING								

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

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		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	SSH	3/20					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 7.39	7.82						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 5.42	11.19						slump
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 6.71	6.52						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FOIT-03	FLOW (gpm)	/						
	TOTAL (gal.)	0.1						
HEATER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)	/						
	INLET RIVER - WATER LEVEL (ft)	/						
	CROTTY STREET - WATER LEVEL (ft)	ice/snow						

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Howmeyer	4/24/14	recorded in field book	
Site Log Book	Monthly			ll ll ll	
Extraction Well Water Levels	Monthly			6, 8, 12 turned off - collected levels	
Inspection	Monthly			City of Bay City Electrical Inspector onsite	
Maintenance	Monthly - As Required				
Level Transmitter Inspection	Monthly			local controls in	EW 6, 8, 12 + 15
Maintenance	Monthly - As Required			none required	
Calibration	Semi-Annually				
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none required	
Air Supply Manifold Inspection	Monthly				
Air Compressor Maintenance	Monthly - As Required				
Heater Check	Monthly (Winter Season)			turned "off"	
Maintenance	Monthly - As Required			none	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	4/24/14	annual in august	
Water Levels	As required			" " "	
General Maintenance	As required			city onsite to change electric meter socket	
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			in bldg on treatment system	
Spare Parts Inventory	As used			extra hose, fittings stored in bldg.	
Staff Gauges Water Levels	As Required			collected	
Exposure Barriers	Monthly			vegetation starting to grow - minor erosion	
Multi-Layer Cap	Monthly			no excavations	
Containment System	Monthly			minor cracks at welds on skidpile walk cap	
Stormwater Collection System	Monthly			standing H ₂ O	
Crotty Street Channel Abandoned 60" Sewer	Monthly			higher than normal level	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

BAY CITY, MICHIGAN

MACHINE STORAGE AREA				NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE P ARTS USED
EW#				SSH	4/24					pump on - turned off
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			19.41						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	12.74							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.93						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	11.00							drops of LNAPL on pump well - probe
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.69						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	11.34							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.11						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	11.04							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.59						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	10.77							
	PUMP CHANGED (Y/N)									LNAPL / H ₂ O bailed ~ 2/5 - 13.58 / 14.85 3/4 gals
	CHLORINE ADDED									
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	14.51							7.67 / 8.45 pump on - turned off
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	9.42							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
FOIT-01	FLOW (gpm)									
	TOTAL (gal.)									
LT-01										
CP-01										
AIR SUPPLY MANIFOLD										
HEATER										
DATE OF LAST SWABBING										

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	SSN	4/24					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 7.39	8.68						
	PUMP CHANGED (Y/N)							
EW-14	CHLORINE ADDED							
	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 5.42	11.09						Sump
EW-15	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
EW-16	DEPTH TO WATER/LNAPL (ft) TARGET DEPT 6.71	6.16						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
FQIT-03	FLOW (gpm)							
FEATER	TOTAL (gal.)							
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)	out of H ₂ O						

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Hoveman	5/5/14	recorded in field book	
Site Log Book	Monthly				
Extraction Well Water Levels	Monthly			pumps are off	
Inspection	Monthly			vaults - OK	
Maintenance	Monthly - As Required			none at this time	
Level Transmitter Inspection	Monthly			local controls at EW 6 & 12+15	
Maintenance	Monthly - As Required			none required	
Calibration	Semi-Annually				
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none required	
Air Supply Manifold Inspection	Monthly				
Air Compressor Maintenance	Monthly - As Required				
Heater Check	Monthly (Winter Season)			"off"	
Maintenance	Monthly - As Required			none	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	5/5/14	Annual in August	
Water Levels	As required			11 11	
General Maintenance	As required				
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			in bldg for GW Treatment system	
Spare Parts Inventory	As used			extra hose, etc stored in bldg	
Staff Gauges Water Levels	As Required			collected	
Exposure Barriers	Monthly			vegetation growing up	
Multi-Layer Cap	Monthly			no excavations - minor erosion	
Containment System	Monthly			sheetpile wall cap has minor cracks at welds	
Stormwater Collection System	Monthly			no flow	
Crotty Street Channel Abandoned 60" Sewer	Monthly			normal level	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT, SPARE PARTS USED
MACHINE STORAGE AREA		SSH	5/5					
EW#	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
EW-6	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74	12.16						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00	9.39						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34	9.73						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.04	9.19						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 10.77	9.55						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51							
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42							
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-01	FLOW (gpm)							
	TOTAL (gal.)							
LI-01								
CP-01								
AIR SUPPLY MANIFOLD								
HEATER								
DATE OF LAST SWABBING								

drops of LNAPL on probe

LNAPL / 1420

13.65 / 14.18

7.10 / 7.14

OK

off

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

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		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	SSH	5/5					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 7.33	8.67						
	PUMP CHANGED (Y/N)							
EW-14	CHLORINE ADDED							
	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 5.42	11.37						sump
EW-15	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
FQIT-03	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 6.71	7.61						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
	FLOW (gpm)							
HEATER	TOTAL (gal.)							
		off						
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)	12.32						

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Howermeyer	6/27/14	recorded in field book	
Site Log Book	Monthly			✓	✓
Extraction Well Water Levels	Monthly			6, 8 + 12 are running	
Inspection	Monthly			temp pump in EW15	
Maintenance	Monthly - As Required			awaiting new pump for EW15	
Level Transmitter Inspection	Monthly			local controls in 6, 8, 12 + 15	
Maintenance	Monthly - As Required			none at this time	
Calibration	Semi-Annually			✓	
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none	
Air Supply Manifold Inspection	Monthly			✓	
Air Compressor Maintenance	Monthly - As Required			✓	
Heater Check	Monthly (Winter Season)			"off"	
Maintenance	Monthly - As Required			none	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	6/27/14	annual in August	
Water Levels	As required			11	11
General Maintenance	As required			look in 2nd GAC - determine proper action	
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			in bldg - as necessary	
Spare Parts Inventory	As used			extra tubing, fittings stored in bldg	
Staff Gauges					
Water Levels	As Required			collected	
Exposure Barriers	Monthly			vegetation grown - 1-1/2' tall	
Multi-Layer Cap	Monthly			no excavations	- some signs of animals
Containment System	Monthly			minor cracks on welds of sheet pile cap	
Stormwater Collection System	Monthly			no flow	
Croft Street Channel					
Abandoned 60" Sewer	Monthly			normal level	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

BAY CITY, MICHIGAN

MACHINE STORAGE AREA				NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE P ARTS USED
EW#				SSH	16/27					pump running
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			17.13						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	12.74							
	PUMP CHANGED (Y/N)									drops of LNAPL on probe pump running
	CHLORINE ADDED									
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.39						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	11.00							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.65						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	11.34							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.08						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	11.04							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.03						
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	10.77							
	PUMP CHANGED (Y/N)									bail LNAPL - 1/4 gal LNAPL/H ₂ O 13.73/14.35
	CHLORINE ADDED									
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	14.51							8.14/8.16 pump running
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.)	TARGET DEPT	9.42							
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EQIT-01	FLOW (gpm)									
	TOTAL (gal.)									
LI-01										
CP-01										
AIR SUPPLY MANIFOLD										
HEATER										
DATE OF LAST SWABBING										

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	SSH	6/27					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 7.39	8.66						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 5.42	11.29						Surge
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 6.71	7.99						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)							
	TOTAL (gal.)							
FBA/IER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)	0.72'						

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	<u>S. Hoeweneyer</u>	<u>7/28/14</u>	<u>recorded daily in field book when on site</u>	
Site Log Book	Monthly			<u>ll</u>	<u>ll</u>
Extraction Well Water Levels	Monthly			<u>collected</u>	
Inspection	Monthly			<u>pumps on running</u>	<u>- Gw Treatment</u>
Maintenance	Monthly - As Required				<u>system down</u>
Level Transmitter Inspection	Monthly			<u>local controls at</u>	<u>EW 15, 12, 8 + 6</u>
Maintenance	Monthly - As Required			<u>no required</u>	
Calibration	Semi-Annually				
Control Panel Inspection	Monthly			<u>OK</u>	
Maintenance	Monthly - As Required			<u>none required</u>	
Air Supply Manifold Inspection	Monthly				
Air Compressor Maintenance	Monthly - As Required				
Heater Check	Monthly (Winter Season)			<u>"off"</u>	<u>summer</u>
Maintenance	Monthly - As Required				

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	1/28/14	Annual in August	
Water Levels	As required				
General Maintenance	As required				waiting on new EWL pump & a GAC drum
Force Main Cleaning	As required				scheduled as necessary
Flowmeter Cleaning	As required				as necessary - located in bldg.
Spare Parts Inventory	As used				extra tubing, etc stored in bldg
Staff Gauges					
Water Levels	As Required				collected
Exposure Barriers	Monthly				no excavations
Multi-Layer Cap	Monthly				vegetation good
Containment System	Monthly				minor cracks on cap of sheetpile wall
Stormwater Collection System	Monthly				catch basins flowing properly
Crotty Street Channel					
Abandoned 60" Sewer	Monthly				normal level

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

MACHINE STORAGE AREA				NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#				SSH	7/28					
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			11.84						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.39						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.55						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.91						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.04									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.18						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 10.77									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			13.74/14.44						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.59/8.61						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
FQIT-01	FLOW (gpm)									
	TOTAL (gal.)									
LT-01										
CP-01										
AIR SUPPLY MANIFOLD										
HEATER										
DATE OF LAST SWABBING										

drops of LNAPL

LNAPL/H₂OLNAPL/H₂O

off

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
CROTTY STREET CHANNEL		SSH	7/28					
EW#								
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft)	TARGET DEPT	7.33	8.66				
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft)	TARGET DEPT	5.42	11.49				
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft)	TARGET DEPT	6.71	8.03				
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)							
	TOTAL (gal.)							
HBATER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)			1.08'				

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Howmeyer	8/5/14	recorded in site field book	
Site Log Book	Monthly			✓	✓
Extraction Well Water Levels	Monthly			collected	
Inspection	Monthly			no pumps running	
Maintenance	Monthly - As Required			GW Treatment System down	
Level Transmitter Inspection	Monthly			local controls in EW15, 12, 8 + 6	
Maintenance	Monthly - As Required			none required	
Calibration	Semi-Annually			✓	
Control Panel Inspection	Monthly			ON	
Maintenance	Monthly - As Required			none required	
Air Supply Manifold Inspection	Monthly			✓	
Air Compressor Maintenance	Monthly - As Required			✓	
Heater Check	Monthly (Winter Season)			"off"	
Maintenance	Monthly - As Required			✓	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	8/5/14	conducting annual sampling	
Water Levels	As required			ll	ll ll
General Maintenance	As required			bdg up-keep	
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			as necessary - in bldg	
Spare Parts Inventory	As used			store tubing, etc in bldg	
Staff Gauges					
Water Levels	As Required			collected	
Exposure Barriers	Monthly			no excavations or digging	
Multi-Layer Cap	Monthly			vegetation good	
Containment System	Monthly			minor erosion; minor cracks at well's on cap	
Stormwater Collection System	Monthly			collect annual sample - little flow	
Crotty Street Channel Abandoned 60" Sewer	Monthly			normal level	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

MACHINE STORAGE AREA		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#								
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)	8/5	SSH					
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74		11.88					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00		9.46					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34		9.51					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.04		8.89					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 10.77		8.80					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51		13.78 / 14.4					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42		8.57					
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-01	FLOW (gpm)							
	TOTAL (gal.)							
LT-01								
CP-01								
AIR SUPPLY MANIFOLD								
HEATER								
DATE OF LAST SWABBING								

LNAPL in EW

drops of LNAPL

off

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT, SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	8/5	SSH					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAFL (ft) TARGET DEPT 7.89	8.66						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAFL (ft) TARGET DEPT 5.42	10.49						sump running
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAFL (ft) TARGET DEPT 6.71	7.98						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)							
	TOTAL (gal.)	off						
HEATER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)							
	INLET RIVER - WATER LEVEL (ft)							
	CROTTY STREET - WATER LEVEL (ft)	1.06'						

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Howemeyer	9/30/14	recorded in	Field book
Site Log Book	Monthly			✓	✓
Extraction Well Water Levels	Monthly			none running	
Inspection	Monthly			GW Treatment	system down
Maintenance	Monthly - As Required			still setting flow rates on pumps	
Level Transmitter Inspection	Monthly			local control on	EW 6, 8, 12 + 15
Maintenance	Monthly - As Required			none required	
Calibration	Semi-Annually			/	
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none	
Air Supply Manifold Inspection	Monthly			/	
Air Compressor Maintenance	Monthly - As Required			/	
Heater Check	Monthly (Winter Season)			"off"	
Maintenance	Monthly - As Required			none	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	9/30/14	annual in August	
Water Levels	As required			11	11
General Maintenance	As required				pump water from sludge holding tank into clearwell
Force Main Cleaning	As required				schedule as necessary
Flowmeter Cleaning	As required				keep eye on sight gauge to determine when necessary
Spare Parts Inventory	As used				extra tubing stored on-site
Staff Gauges Water Levels	As Required				collected
Exposure Barriers	Monthly				vegetation is green/brown - ok
Multi-Layer Cap	Monthly				no excavations
Containment System	Monthly				minor cracks at welds on cap of steel pile
Stormwater Collection System	Monthly				minor flow
Crotty Street Channel Abandoned 60" Sewer	Monthly				normal to a little high - recent rains

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

MACHINE STORAGE AREA				NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT, SPARE P ARTS USED
SSH				9/30						
EW#										
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 12.74									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.48						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.00									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.63						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.34									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.71						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 11.04									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.99						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 10.77									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 14.51									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			7.52						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 9.42									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
FQIT-01	FLOW (gpm)			/						
	TOTAL (gal.)			0N						
LT-01				/						
CP-01				0 ft						
AIR SUPPLY MANIFOLD										
HEATER										
DATE OF LAST SWABBING										

LNAPL / H₂O
13.75 / 14.63

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

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		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
EW#	CROTTY STREET CHANNEL	SSH	9/30					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 7.39	8.03						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 5.42	6.36						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft) TARGET DEPTH 6.71	7.59						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)							
HEATER	TOTAL (gal.)	0 ft						
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)	-						
	INLET RIVER - WATER LEVEL (ft)	-						
	CROTTY STREET - WATER LEVEL (ft)	1.28'						

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Howenyczer	10/16/14	recorded in	field book
Site Log Book	Monthly			1 L	1 L
Extraction Well Water Levels	Monthly			turned on 6, 8, 12 + 15	
Inspection	Monthly			all running	
Maintenance	Monthly - As Required			Ino-tek onsite for PLC programmed	
Level Transmitter Inspection	Monthly			local controls in EW 6, 8, 12 + 15	
Maintenance	Monthly - As Required			none required	
Calibration	Semi-Annually			/	
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none	
Air Supply Manifold Inspection	Monthly			/	
Air Compressor Maintenance	Monthly - As Required			/	
Heater Check	Monthly (Winter Season)			"off"	
Maintenance	Monthly - As Required			none	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	10/16/14	annual in August	
Water Levels	As required			11	11
General Maintenance	As required			check all floats with programming	
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			in bldg - sight gauge - as necessary	
Spare Parts Inventory	As used			extra tubing, fittings stored onsite	
Staff Gauges					
Water Levels	As Required			collected	
Exposure Barriers	Monthly			vegetation mostly brown - OK - minor erosion	
Multi-Layer Cap	Monthly			no excavations	
Containment System	Monthly			minor cracks at welds on cap & sheet pile	
Stormwater Collection System	Monthly			no flow	
Crotty Street Channel					
Abandoned 60" Sewer	Monthly			normal level	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

MACHINE STORAGE AREA				NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE P ARTS USED
EW#				SSN	10/16					turned on
EW-6	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			12.07						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 12.74									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-7	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			9.39						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 11.00									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									turned on
EW-8	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			14.09						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 11.34									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-9	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.73						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 11.04									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
EW-10	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			8.79						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 10.77									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									LNAPL/H2O
EW-11	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)									
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 14.51									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									turned on
EW-12	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)									
	AIR PRESSURE (psi)			7.87						
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 9.42									
	PUMP CHANGED (Y/N)									
	CHLORINE ADDED									
FQIT-01	FLOW (gpm)			—						
	TOTAL (gal.)			—						
LT-01				on						
CP-01				off						
AIR SUPPLY MANIFOLD										
HEATER										
DATE OF LAST SWABBING										

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
CROTTY STREET CHANNEL		SSH	10/16					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 7.39	7.41						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 5.42	5.75						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPT 6.71	7.23						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)	/						
	TOTAL (gal.)	off						
FBAIER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)	/						
	INLET RIVER - WATER LEVEL (ft)	/						
	CROTTY STREET - WATER LEVEL (ft)							

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
O&M Log	Monthly	S. Howmeyer	11/26/14	recorded in field book	
Site Log Book	Monthly			✓	✓
Extraction Well Water Levels	Monthly			EW pump's off	
Inspection	Monthly			total flow thru GW Treatment system	
Maintenance	Monthly - As Required			31,004 gals	
Level Transmitter Inspection	Monthly			local controls only	
Maintenance	Monthly - As Required			none	
Calibration	Semi-Annually			✓	
Control Panel Inspection	Monthly			OK	
Maintenance	Monthly - As Required			none	
Air Supply Manifold Inspection	Monthly			✓	
Air Compressor Maintenance	Monthly - As Required			✓	
Heater Check	Monthly (Winter Season)			"off"	turn on in Dec.
Maintenance	Monthly - As Required			none at this time	

O&M LOG
CSC/MSA
BAY CITY, MICHIGAN

Description	Frequency	Inspected By (Print)	Date	Inspection Results (1)	Nature of Maintenance/Repairs (1)
Monitoring Well Sampling	As Required	SSH	11/26/14	annual in August	
Water Levels	As required			ll ll	
General Maintenance	As required			check bldg for winter, sweep, etc.	
Force Main Cleaning	As required			schedule as necessary	
Flowmeter Cleaning	As required			as necessary - sight gauge	
Spare Parts Inventory	As used			extra tubing, fittings stored in bldg	
Staff Gauges					
Water Levels	As Required			collected	
Exposure Barriers	Monthly			vegetation brown - couple animal burrows	
Multi-Layer Cap	Monthly			no excavations - minor erosion	
Containment System	Monthly			minor cracks at wells on shut pile up	
Stormwater Collection System	Monthly			standing H ₂ O	
Croft Street Channel Abandoned 60" Sewer	Monthly			normal to a little high	

* Note: All of the suggested frequencies are minimums and additional maintenance may be required
(1) - Attach additional documentation.

		NAME	DATE	NAME	DATE	NAME	DATE	NOTES, DESCRIPTION OF MAINT., SPARE PARTS USED
BW#	CROTTY STREET CHANNEL	SS/H	11/26					
EW-13	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 7.39	8.73						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-14	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 5.42	11.30						Sump
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
EW-15	PUMP CYCLING BEFORE/AFTER MAINTENANCE (count/min)							
	AIR PRESSURE (psi)							
	DEPTH TO WATER/LNAPL (ft.) TARGET DEPTH 6.71	7.22						
	PUMP CHANGED (Y/N)							
	CHLORINE ADDED							
FQIT-03	FLOW (gpm)	/						
	TOTAL (gal.)	off						
HEATER								
DATE OF LAST SWABBING								
STAFF GAUGES	INLET SLIP - WATER LEVEL (ft)	/						
	INLET RIVER - WATER LEVEL (ft)	-						broke from driftwood
	CROTTY STREET - WATER LEVEL (ft)							

Attachment B

Analytical Results Summary (2006 to 2014)

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

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

Notes:

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

ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

AOI:		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	CSA GW Ext. Sys. Discharge
Sample ID:		W-12610-040611-SSH-11103	W-12610-040611-SSH-11104	W-12610-102511-SSH-027	W-12610-041712-SSH-SA1202	GW-12610-080712-SSH-001	W-12610-040913-SSH-CB1213	W-040506-SSH-C03
Sample Date:		4/6/2011	4/6/2011	10/25/2011	4/17/2012	8/7/2012	4/9/2013	4/5/2006
			(Duplicate)					
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	0.0002 J	-	-	-	-
Arsenic	mg/L	-	-	0.005 U	-	-	-	-
Barium	mg/L	-	-	0.022 JB	-	-	-	-
Beryllium	mg/L	-	-	0.001 U	-	-	-	-
Cadmium	mg/L	-	-	0.001 U	-	-	-	-
Chromium	mg/L	-	-	0.01 U	-	-	-	-
Cobalt	mg/L	-	-	0.00012 J	-	-	-	-
Copper	mg/L	-	-	0.0025 JB	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	0.003 U	-	-	-	-
Mercury	mg/L	-	-	0.0002 U D 0.00000084	-	-	-	-
Nickel	mg/L	-	-	0.00043 JB	-	-	-	-
Selenium	mg/L	-	-	0.0025 J	-	-	-	-
Silver	mg/L	-	-	0.0002 U	-	-	-	-
Thallium	mg/L	-	-	0.00024 J	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	0.00046 J	-	-	-	-
Zinc	mg/L	-	-	0.0025 JB	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.36
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.20 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	1.0 U	-	-	-	-
Ethylbenzene	µg/L	-	-	1.0 U	-	-	-	-
Toluene	µg/L	-	-	1.0 U	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	1.0 U	-	-	-	-
Vinyl chloride	µg/L	-	-	1.0 U	-	-	-	-
Xylenes (total)	µg/L	-	-	2.0 U	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel
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
Sample ID:		GW-081606-SSH-0601	W-031307-SSH-C07-3	CSC	CSC-(06/11/08)	DUP-(06/11/08)	CSC_(08/19/08)
Sample Date:		8/16/2006	3/13/2007	8/23/2007	6/11/2008	6/11/2008 (Duplicate)	8/19/2008
Parameters:	Units						
Metals							
Antimony	mg/L	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.47	0.23 J	0.51	0.074 J	0.077 J	0.38
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-
General Chemistry							
Oil and grease	mg/L	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel	Crotty Street Channel
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
Sample ID:		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
Sample Date:		3/12/2009	8/27/2009	4/30/2010	8/19/2010	8/19/2010 (Duplicate)	4/6/2011
Parameters:	Units						
Metals							
Antimony	mg/L	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.14 J	0.75	0.59 J	0.62	0.63	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-
General Chemistry							
Oil and grease	mg/L	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		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. 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
Sample ID:		GW-12610-082211-JY-002	W-12610-041712-SSH-SA1201	GW-12610-080712-SSH-002	W-12610-040913-SSH-CS1013	W-12610-040913-SSH-CS1113	GW-12610-080713-JY-003	GW-12610-080514-SSH-1402
Sample Date:		8/22/2011	4/17/2012	8/7/2012	4/9/2013	4/9/2013 (Duplicate)	8/7/2013	8/5/2014
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.097 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.097 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.097 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.96	0.62	0.86	0.19 U	0.19 U	0.55	0.68J
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.097 U	0.20 U	0.19 U	0.059 J	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.097 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.044 J	0.097 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:	Crotty Street Channel	Crotty Street Channel	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:	CSA GW Ext. Sys. Discharge	EW14	Effluent	Effluent	EW6	EW7	EW8
Sample ID:	W-12610-122914-SSH-1420	GW-12610-071811-SH-004	W-12610-022614-1403	W-12610-090514-SSH-1411	GW-12610-072011-SH-016	GW-12610-071811-SH-001(C)	GW-12610-071911-SH-009C
Sample Date:	12/29/2014	7/18/2011	2/26/2014	9/5/2014	7/20/2011	7/18/2011	7/19/2011
Parameters:	Units						
Metals							
Antimony	mg/L	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-
Cadmium	mg/L	-	0.002 U	0.002 U	-	-	-
Chromium	mg/L	-	0.005 U	0.005 U	-	-	-
Cobalt	mg/L	-	-	-	-	-	-
Copper	mg/L	-	0.02 U	0.021	-	-	-
Iron	mg/L	-	0.18	0.54	-	-	-
Lead	mg/L	-	0.003 U	0.003 U	-	-	-
Mercury	mg/L	0.00000036 J	0.00002 U	0.00002 U	-	-	-
Nickel	mg/L	-	0.0078 J	0.02 U	-	-	-
Selenium	mg/L	-	-	-	-	-	-
Silver	mg/L	-	0.005 U	0.005 U	-	-	-
Thallium	mg/L	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.19 U	0.098 U	0.095 U	-	-
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.19 U	0.098 U	0.095 U	-	-
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.19 U	0.098 U	0.095 U	-	-
Aroclor-1242 (PCB-1242)	µg/L	0.22	0.54	0.098 U	0.095 U	-	-
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.19 U	0.098 U	0.095 U	-	-
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.19 U	0.098 U	0.095 U	-	-
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.19 U	0.098 U	0.095 U	-	-
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	-	1.0 U	-	1.0 U	1.0 U	200
Ethylbenzene	µg/L	-	1.0 U	-	0.33 J	1.0 U	3.0 J
Toluene	µg/L	-	1.0 U	-	1.0 U	1.0 U	18
trans-1,2-Dichloroethene	µg/L	-	1.0 U	-	1.0 U	1.0 U	2.9 J
Vinyl chloride	µg/L	-	1.0 U	1.0 U	1.0 U	1.0 U	140
Xylenes (total)	µg/L	-	2.0 U	-	2.0 U	0.99 J	16
General Chemistry							
Oil and grease	mg/L	-	-	1.7 J	4.9 U	-	-
Ammonia (as N)	mg/L	-	-	6.7	2.0 U	-	-
COD	mg/L	-	-	10 U	10 U	-	-
pH	mg/L	-	-	8.09	7.38	-	-
BOD	mg/L	-	-	2.3	2.0 U	-	-
TSS	mg/L	-	-	4.0	4.0 U	-	-
Total Phosphorus	mg/L	-	-	0.20	0.10 U	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area
Sample Location:		EW9	EW9	EW10	EW11	EW12	MSA GW Ext. Sys. Discharge	MSA GW Ext. Sys. Discharge
Sample ID:		GW-12610-071811-SH-002(C)	GW-12610-071811-SH-003	GW-12610-072011-SH-017	GW-12610-071911-SH-008C	GW-12610-072011-SH-015	W-040506-SSH-M02	GW-081606-SSH-0602
Sample Date:		7/18/2011	7/18/2011	7/20/2011	7/19/2011	7/20/2011	4/5/2006	8/16/2006
			(Duplicate)					
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	-	-	-	-	-	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	-	-	-	-	-	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	-	-	-	-	-	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	-	-	-	-	-	0.20 U	0.62
Aroclor-1248 (PCB-1248)	µg/L	-	-	-	-	-	0.20	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	-	-	-	-	-	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	-	-	-	-	-	0.18 J	0.24
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	630	49	-	-
Ethylbenzene	µg/L	0.54 J	0.54 J	1.0 U	29 U	1.4 J	-	-
Toluene	µg/L	1.7	1.8	1.0 U	33	3.5	-	-
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	29 U	1.1 J	-	-
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	98	86	-	-
Xylenes (total)	µg/L	3.4	3.4	2.0 U	57 U	14	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		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
Sample ID:		W-031307-SSH-M07-2	MSA	MSA-(06/11/08)	MSA_(08/19/08)	DUP_(03/12/09)	MSA_(03/12/09)
Sample Date:		3/13/2007	8/23/2007	6/11/2008	8/19/2008	3/12/2009 (Duplicate)	3/12/2009
Parameters:	Units						
Metals							
Antimony	mg/L	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/L	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	1.0 U	0.20 U	0.20 U	0.25	0.20 U	2.1
Aroclor-1248 (PCB-1248)	µg/L	1.0 U	0.30	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	1.0 U	0.26	0.20 U	0.28	0.20 U	0.20
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-
General Chemistry							
Oil and grease	mg/L	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:							
Sample Location:	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>
Sample ID:	<i>MSA GW Ext. Sys. Discharge</i>	<i>MSA GW Ext. Sys. Discharge</i>	<i>MSA GW Ext. Sys. Discharge</i>	<i>MSA GW Ext. Sys. Discharge</i>	<i>MSA GW Ext. Sys. Discharge</i>	<i>MSA GW Ext. Sys. Discharge</i>	<i>MSA GW Ext. Sys. Discharge</i>
Sample Date:	<i>MSA</i>	<i>W-12610-032410-SSH-MSA10-2</i>	<i>GW-12610-081910-SSH-028</i>	<i>W-12610-040611-SSH-11101</i>	<i>GW-12610-082211-JY-001</i>	<i>W-12610-041712-SSH-SA1203</i>	
	<i>8/27/2009</i>	<i>3/24/2010</i>	<i>8/19/2010</i>	<i>4/6/2011</i>	<i>8/22/2011</i>	<i>4/17/2012</i>	
Parameters:	Units						
Metals							
Antimony	mg/L	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.096 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.096 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.096 U
Aroclor-1242 (PCB-1242)	µg/L	1.3	0.20 U	0.20 U	0.13 J	0.19 U	0.096 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.40
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.096 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.17 J	0.20 U	0.19 U	0.18
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-
General Chemistry							
Oil and grease	mg/L	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		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	Machine Storage Area
Sample ID:		GW-12610-080712-SSH-003	W-12610-040913-SSH-MSA1313	W-12610-120913-SSH-010	GW-12610-080514-SSH-1401	W-12610-122914-SSH-1422	GW-081606-SSH-0604	Machine Storage Area
Sample Date:		8/7/2012	4/9/2013	12/09/13	8/5/2014	12/29/2014	8/16/2006	Machine Storage Area
								MW102D1
								MW102D1
								8/21/2007
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.19 J	0.44
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	1.9 U	0.20 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	1.9 U	0.20 U	R	0.19 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	8.6	0.20 U	R	0.19 U	0.20 U	0.20 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

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
Sample Location:	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D1	MW102D2
Sample ID:	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	GW-081606-SSH-0606
Sample Date:	8/19/2008	8/26/2009	8/17/2010	8/23/2011	8/9/2012	8/7/2013	8/6/2014	8/16/2006
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.40 J	0.31	0.28	0.43	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	R	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 UJ	0.20 U	0.046 J	0.19 U	R	0.20 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

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
Sample Location:		MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2	MW102D2
Sample ID:		MW102D2	MW102D2_08/19/08	MW102D2	GW-12610-081710-JY-002	GW-12610-082311-JY-011	GW-12610-080912-SSH-011	GW-12610-080713-JY-005	GW-12610-080614-SSH-1404
Sample Date:		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								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.073 J	0.13 J	0.20 U	0.19 U	0.19 U	0.13 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.13 J	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

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
Sample Location:		MW102D3	MW102D3	MW102D3	MW102D3	MW102D3	MW102D4	MW102D4	MW102D4	MW102D4
Sample ID:		GW-081606-SSH-0607	MW102D3	MW102D3_08/19/08	MW102D3	GW-12610-081710-JY-003	GW-081606-SSH-0605	MW102D4	MW102D4_08/19/08	MW102D4
Sample Date:		8/16/2006	8/21/2007	8/19/2008	8/26/2009	8/17/2010	8/16/2006	8/21/2007	8/19/2008	8/26/2009
Parameters:		Units								
Metals										
Antimony	mg/L	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls										
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds										
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-
General Chemistry										
Oil and grease	mg/L	-	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		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
Sample ID:		GW-12610-081710-JY-004	GW-12610-082311-JY-012	GW-12610-080912-SSH-010	GW-12610-080713-JY-006	GW-12610-080614-SSH-140S	GW-12610-080614-SSH-1406	GW-081706-SSH-0608
Sample Date:		8/17/2010	8/23/2011	8/9/2012	8/7/2013	8/6/2014	8/6/2014 (Duplicate)	8/17/2006
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.084 J	0.082 J	0.19 U	0.19	0.19 U	0.19 U	0.11 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

AOI:		<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>	<i>Machine Storage Area</i>
Sample Location:		MW3005	MW3005	MW3005	MW3005	MW3005	MW3005	MW3005	MW3005
Sample ID:		GW-081706-SSH-0609	MW3005	MW3005_(08/19/08)	DUP 4	MW3005	GW-12610-081810-JY-011	GW-12610-081810-JY-012	GW-12610-082311-JY-004
Sample Date:		8/17/2006 (Duplicate)	8/21/2007	8/19/2008	8/26/2009 (Duplicate)	8/26/2009	8/18/2010	8/18/2010 (Duplicate)	8/23/2011
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.095 J	0.24	0.21	0.40 J	0.39 J	0.14 J	0.16 J	0.23
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Machine Storage Area	Perimeter Banks	Perimeter Banks
Sample Location:		MW300S	MW300S	MW300S	MW300S	MW300S	MW300S	LMW13S	LMW13S
Sample ID:		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-081706-SSH-0610	LMW13S
Sample Date:		8/23/2011 (Duplicate)	8/9/2012	8/9/2012 (Duplicate)	8/7/2013	8/7/2013 (Duplicate)	8/6/2014	8/17/2006	8/21/2007
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.24	0.19 U	0.083 J	0.19 J	0.19 J	0.1 J	0.20 U	1.0
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.2	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	R	R	0.19 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	R	R	0.19 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:		LMW135	LMW135	LMW135	LMW135	LMW135	LMW135	LMW135	LMW15D
Sample ID:		LMW135_08/18/08	GW-12610-081710-JY-009	GW-12610-082311-JY-006	GW-12610-080812-SSH-004	GW-12610-080812-SSH-005	GW-12610-080813-JY-008	GW-12610-080614-SSH-1408	GW-081706-SSH-0611
Sample Date:		8/18/2008	8/17/2010	8/23/2011	8/8/2012	8/8/2012 (Duplicate)	8/8/2013	8/6/2014	8/17/2006
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.72	0.79	0.85	0.19 UJ	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	1.6	1.1	0.19 U	0.19 U	0.19 U	1.0 J	1.0	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:	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
Sample ID:	LMW15D	LMW15D_08/18/08	LMW15D	GW-12610-081710-JY-010	GW-12610-082311-JY-007	GW-12610-080812-SSH-006	GW-12610-080813-JY-009	GW-12610-080614-SSH-1409
Sample Date:	8/21/2007	8/18/2008	8/26/2009	8/17/2010	8/23/2011	8/8/2012	8/8/2013	8/6/2014
Parameters:	Units							
Metals								
Antimony	mg/L	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.19 J	0.073 J	0.20 U	0.060 J	0.13 J	0.065 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 UJ	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.19 U	0.19 UJ	0.19 U
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-
General Chemistry								
Oil and grease	mg/L	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

AOI:		Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:		MW301D1	MW301D1	MW301D1	MW301D1	MW301D1	MW301D2	MW301D2	MW301D2
Sample ID:		GW-081706-SSH-0612	MW301D1	MW301D1_(08/19/08)	MW301D1	GW-12610-081710-JY-005	GW-081706-SSH-0615	MW301D2	MW301D2_(08/19/08)
Sample Date:		8/17/2006	8/21/2007	8/19/2008	8/26/2009	8/17/2010	8/17/2006	8/21/2007	8/19/2008
Parameters:	Units								
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.085 J
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

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

ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN

AOI:		Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks	Perimeter Banks
Sample Location:		MW301D2	MW301D2	MW301D2	MW301D2	MW301D2	MW301D3	MW301D3	MW301D3
Sample ID:		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-081706-SSH-0614	MW301D3	MW301D3_(08/19/08)
Sample Date:		8/17/2010	8/23/2011	8/9/2012	8/7/2013	8/6/2014	8/17/2006	8/21/2007	8/19/2008
Parameters:		Units							
Metals									
Antimony	mg/L	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.20 U
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-
General Chemistry									
Oil and grease	mg/L	-	-	-	-	-	-	-	-
Ammonia (as N)	mg/L	-	-	-	-	-	-	-	-
COD	mg/L	-	-	-	-	-	-	-	-
pH	mg/L	-	-	-	-	-	-	-	-
BOD	mg/L	-	-	-	-	-	-	-	-
TSS	mg/L	-	-	-	-	-	-	-	-
Total Phosphorus	mg/L	-	-	-	-	-	-	-	-

Notes:

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

**ANALYTICAL RESULTS SUMMARY
RACER TRUST- BAY CITY INDUSTRIAL LAND
BAY CITY, MICHIGAN**

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

Notes:

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

Attachment C

Analytical Results and Reduced Validation – 2014 Annual Sampling Event

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-34549-1

Client Project/Site: 12610-T04, RACER Bay City

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

3/7/2014 2:31:54 PM

Denise Heckler, Project Manager II

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Job ID: 240-34549-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12610-T04, RACER Bay City

Report Number: 240-34549-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 02/27/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for volatile organic compounds (GCMS) in accordance with EPA Method 624. The samples were analyzed on 03/04/2014.

No difficulties were encountered during the VOCs analysis.

All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 02/28/2014 and analyzed on 03/03/2014.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Job ID: 240-34549-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 02/28/2014 and analyzed on 03/03/2014.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

MERCURY

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 02/28/2014 and analyzed on 03/04/2014.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

N-HEXANE EXTRACTABLE MATERIAL

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for n-hexane extractable material in accordance with EPA Method 1664A. The samples were prepared and analyzed on 03/04/2014.

HEM was detected in method blank MB 240-121341/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No other difficulties were encountered during the HEM analysis.

All other quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 02/28/2014.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

AMMONIA

Samples W-12610-022614-SSH-1402 (240-34549-1) and W-12610-022614-SSH-1403 (240-34549-2) were analyzed for ammonia in accordance with EPA Method 350.2. The samples were prepared and analyzed on 03/03/2014.

No difficulties were encountered during the ammonia analysis.

All quality control parameters were within the acceptance limits.

CHEMICAL OXYGEN DEMAND

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were analyzed on 03/04/2014.

No difficulties were encountered during the COD analysis.

All quality control parameters were within the acceptance limits.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Job ID: 240-34549-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

TOTAL PHOSPHORUS

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for total phosphorus in accordance with SM 4500 P E. The samples were prepared and analyzed on 03/03/2014.

No difficulties were encountered during the total phosphorus analysis.

All quality control parameters were within the acceptance limits.

PH

Sample W-12610-022614-SSH-1403 (240-34549-2) was analyzed for pH in accordance with SM 4500 H+ B. The samples were analyzed past the method recommended 15 minute holding time on 02/27/2014.

No difficulties were encountered during the pH analysis.

All quality control parameters were within the acceptance limits.

BIOCHEMICAL OXYGEN DEMAND

Sample W-12610-022614-SSH-1403 (240-34549-3) was analyzed for Biochemical Oxygen Demand in accordance with SM 5210B. The samples were analyzed on 02/27/2014.

The USB dilution water D.O. depletion was greater than 0.2 mg/L but less than the reporting limit of 2.0 mg/L. The associated sample results are reported for batch 145371.

No difficulties were encountered during the BOD analysis.

All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Qualifiers

GC/MS VOA

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

GC Semi VOA

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

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
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
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.
b	Result Detected in the Unseeded Control blank (USB).

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-34549-1	W-12610-022614-SSH-1402	Water	02/26/14 13:30	02/27/14 10:00
240-34549-2	W-12610-022614-SSH-1403	Water	02/26/14 16:10	02/27/14 10:00
240-34549-3	W-12610-022614-SSH-1403	Water	02/26/14 16:10	02/27/14 10:00

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Client Sample ID: W-12610-022614-SSH-1402

Lab Sample ID: 240-34549-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	6.7		2.0	0.87 mg/L	1		350.2	Total/NA

Client Sample ID: W-12610-022614-SSH-1403

Lab Sample ID: 240-34549-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Iron	180		100	81 ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	7.8	J	20	3.2 ug/L	1		200.7 Rev 4.4	Total Recoverable
HEM	1.7	J B	4.7	0.73 mg/L	1		1664A	Total/NA
Ammonia (as N)	4.4		2.0	0.87 mg/L	1		350.2	Total/NA
pH	8.09	HF	0.100	0.100 SU	1		4500 H+ B-2000	Total/NA
Total Suspended Solids	4.0		4.0	1.8 mg/L	1		SM 2540D	Total/NA
Total Phosphorus as P	0.20		0.10	0.014 mg/L	1		SM4500 P E-1999	Total/NA

Client Sample ID: W-12610-022614-SSH-1403

Lab Sample ID: 240-34549-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Biochemical Oxygen Demand	2.3	b	2.0	2.0 mg/L	1		SM5210B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL CAN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
1664A	HEM and SGT-HEM	1664A	TAL CAN
350.2	Nitrogen, Ammonia, Distillation	MCAWW	TAL CAN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN
SM5210B	BOD, 5 Day	SM	TAL NSH

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

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Client Sample ID: W-12610-022614-SSH-1403

Date Collected: 02/26/14 16:10

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.22 ug/L			03/04/14 04:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		81 - 112				03/04/14 04:50	1
1,2-Dichloroethane-d4 (Surr)	80		80 - 125				03/04/14 04:50	1
Toluene-d8 (Surr)	92		84 - 110				03/04/14 04:50	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Client Sample ID: W-12610-022614-SSH-1403

Date Collected: 02/26/14 16:10

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.043 ug/L		02/28/14 08:16	03/03/14 16:46	1
Aroclor-1221	0.098	U	0.098	0.044 ug/L		02/28/14 08:16	03/03/14 16:46	1
Aroclor-1232	0.098	U	0.098	0.072 ug/L		02/28/14 08:16	03/03/14 16:46	1
Aroclor-1242	0.098	U	0.098	0.059 ug/L		02/28/14 08:16	03/03/14 16:46	1
Aroclor-1248	0.098	U	0.098	0.060 ug/L		02/28/14 08:16	03/03/14 16:46	1
Aroclor-1254	0.098	U	0.098	0.031 ug/L		02/28/14 08:16	03/03/14 16:46	1
Aroclor-1260	0.098	U	0.098	0.037 ug/L		02/28/14 08:16	03/03/14 16:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	89		10 - 114			02/28/14 08:16	03/03/14 16:46	1
Tetrachloro-m-xylene	65		15 - 131			02/28/14 08:16	03/03/14 16:46	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Client Sample ID: W-12610-022614-SSH-1403

Date Collected: 02/26/14 16:10

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	2.2 ug/L		02/28/14 06:48	03/03/14 14:51	1
Cadmium	2.0	U	2.0	0.66 ug/L		02/28/14 06:48	03/03/14 14:51	1
Chromium	5.0	U	5.0	2.2 ug/L		02/28/14 06:48	03/03/14 14:51	1
Copper	20	U	20	4.5 ug/L		02/28/14 06:48	03/03/14 14:51	1
Iron	180		100	81 ug/L		02/28/14 06:48	03/03/14 14:51	1
Nickel	7.8	J	20	3.2 ug/L		02/28/14 06:48	03/03/14 14:51	1
Lead	3.0	U	3.0	1.9 ug/L		02/28/14 06:48	03/03/14 14:51	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-022614-SSH-1403

Date Collected: 02/26/14 16:10

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12 ug/L		02/28/14 15:05	03/04/14 17:37	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

General Chemistry

Client Sample ID: W-12610-022614-SSH-1402

Date Collected: 02/26/14 13:30

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	6.7		2.0	0.87 mg/L		03/03/14 07:00	03/03/14 14:22	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

General Chemistry

Client Sample ID: W-12610-022614-SSH-1403

Date Collected: 02/26/14 16:10

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.7	J B	4.7	0.73 mg/L		03/04/14 09:34	03/04/14 09:34	1
Ammonia (as N)	4.4		2.0	0.87 mg/L		03/03/14 07:00	03/03/14 14:27	1
Chemical Oxygen Demand	10	U	10	7.8 mg/L			03/04/14 10:45	1
pH	8.09	HF	0.100	0.100 SU			02/27/14 14:46	1
Total Suspended Solids	4.0		4.0	1.8 mg/L			02/28/14 09:15	1
Total Phosphorus as P	0.20		0.10	0.014 mg/L		03/03/14 09:01	03/03/14 13:50	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

General Chemistry

Client Sample ID: W-12610-022614-SSH-1403

Date Collected: 02/26/14 16:10

Date Received: 02/27/14 10:00

Lab Sample ID: 240-34549-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.3	b	2.0	2.0 mg/L			02/27/14 13:50	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

GC/MS VOA

Analysis Batch: 121265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	624	
LCS 240-121265/25	Lab Control Sample	Total/NA	Water	624	
MB 240-121265/24	Method Blank	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 121051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	3520C	
LCS 240-121051/6-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-121051/5-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 121250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	608	121051
LCS 240-121051/6-A	Lab Control Sample	Total/NA	Water	608	121051
MB 240-121051/5-A	Method Blank	Total/NA	Water	608	121051

Metals

Prep Batch: 121019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total Recoverable	Water	200.7	
240-34549-2 MS	W-12610-022614-SSH-1403	Total Recoverable	Water	200.7	
240-34549-2 MSD	W-12610-022614-SSH-1403	Total Recoverable	Water	200.7	
LCS 240-121019/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-121019/1-A	Method Blank	Total Recoverable	Water	200.7	

Prep Batch: 121020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	245.1	
240-34549-2 MS	W-12610-022614-SSH-1403	Total/NA	Water	245.1	
240-34549-2 MSD	W-12610-022614-SSH-1403	Total/NA	Water	245.1	
LCS 240-121020/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-121020/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 121174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total Recoverable	Water	200.7 Rev 4.4	121019
240-34549-2 MS	W-12610-022614-SSH-1403	Total Recoverable	Water	200.7 Rev 4.4	121019
240-34549-2 MSD	W-12610-022614-SSH-1403	Total Recoverable	Water	200.7 Rev 4.4	121019
LCS 240-121019/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	121019
MB 240-121019/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	121019

Analysis Batch: 121437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	245.1	121020
240-34549-2 MS	W-12610-022614-SSH-1403	Total/NA	Water	245.1	121020
240-34549-2 MSD	W-12610-022614-SSH-1403	Total/NA	Water	245.1	121020
LCS 240-121020/2-A	Lab Control Sample	Total/NA	Water	245.1	121020

TestAmerica Canton

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Metals (Continued)

Analysis Batch: 121437 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-121020/1-A	Method Blank	Total/NA	Water	245.1	121020

General Chemistry

Analysis Batch: 120972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	4500 H+ B-2000	
240-34549-2 DU	W-12610-022614-SSH-1403	Total/NA	Water	4500 H+ B-2000	
LCS 240-120972/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 121064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	SM 2540D	
LCS 240-121064/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 240-121064/1	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 121186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	365.2/365.3/365	
240-34549-2 MS	W-12610-022614-SSH-1403	Total/NA	Water	365.2/365.3/365	
240-34549-2 MSD	W-12610-022614-SSH-1403	Total/NA	Water	365.2/365.3/365	
LCS 240-121186/11-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
MB 240-121186/10-A	Method Blank	Total/NA	Water	365.2/365.3/365	

Prep Batch: 121190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-1	W-12610-022614-SSH-1402	Total/NA	Water	Distill/Ammonia	
240-34549-1 MS	W-12610-022614-SSH-1402	Total/NA	Water	Distill/Ammonia	
240-34549-1 MSD	W-12610-022614-SSH-1402	Total/NA	Water	Distill/Ammonia	
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	Distill/Ammonia	
LCS 240-121190/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 240-121190/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 121245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-1	W-12610-022614-SSH-1402	Total/NA	Water	350.2	121190
240-34549-1 MS	W-12610-022614-SSH-1402	Total/NA	Water	350.2	121190
240-34549-1 MSD	W-12610-022614-SSH-1402	Total/NA	Water	350.2	121190
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	350.2	121190
LCS 240-121190/2-A	Lab Control Sample	Total/NA	Water	350.2	121190
MB 240-121190/1-A	Method Blank	Total/NA	Water	350.2	121190

Analysis Batch: 121273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	SM4500 P E-1999	121186
240-34549-2 MS	W-12610-022614-SSH-1403	Total/NA	Water	SM4500 P E-1999	121186
240-34549-2 MSD	W-12610-022614-SSH-1403	Total/NA	Water	SM4500 P E-1999	121186

TestAmerica Canton

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

General Chemistry (Continued)

Analysis Batch: 121273 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-121186/11-A	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	121186
MB 240-121186/10-A	Method Blank	Total/NA	Water	SM4500 P E-1999	121186

Prep Batch: 121341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	1664A	
LCS 240-121341/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 240-121341/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 121355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	1664A	121341
LCS 240-121341/2-A	Lab Control Sample	Total/NA	Water	1664A	121341
MB 240-121341/1-A	Method Blank	Total/NA	Water	1664A	121341

Analysis Batch: 121418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-2	W-12610-022614-SSH-1403	Total/NA	Water	410.4	
LCS 240-121418/10	Lab Control Sample	Total/NA	Water	410.4	
MB 240-121418/9	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 145371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-34549-3	W-12610-022614-SSH-1403	Total/NA	Water	SM5210B	
LCS 490-145371/3	Lab Control Sample	Total/NA	Water	SM5210B	
SB 490-145371/2	Method Blank	Total/NA	Water	SM5210B	
SCB 490-145371/4	Method Blank	Total/NA	Water	SM5210B	
USB 490-145371/1	Method Blank	Total/NA	Water	SM5210B	

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Lab Sample ID: MB 240-121265/24

Matrix: Water

Analysis Batch: 121265

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.22 ug/L			03/03/14 19:54	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		81 - 112				03/03/14 19:54	1
1,2-Dichloroethane-d4 (Surr)	88		80 - 125				03/03/14 19:54	1
Toluene-d8 (Surr)	97		84 - 110				03/03/14 19:54	1

Lab Sample ID: LCS 240-121265/25

Matrix: Water

Analysis Batch: 121265

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	20.0	17.6		ug/L		88	10 - 251
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	92		81 - 112				
1,2-Dichloroethane-d4 (Surr)	92		80 - 125				
Toluene-d8 (Surr)	102		84 - 110				

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

Lab Sample ID: MB 240-121051/5-A

Matrix: Water

Analysis Batch: 121250

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 121051

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.044 ug/L		02/28/14 08:16	03/03/14 17:01	1
Aroclor-1221	0.10	U	0.10	0.045 ug/L		02/28/14 08:16	03/03/14 17:01	1
Aroclor-1232	0.10	U	0.10	0.073 ug/L		02/28/14 08:16	03/03/14 17:01	1
Aroclor-1242	0.10	U	0.10	0.060 ug/L		02/28/14 08:16	03/03/14 17:01	1
Aroclor-1248	0.10	U	0.10	0.061 ug/L		02/28/14 08:16	03/03/14 17:01	1
Aroclor-1254	0.10	U	0.10	0.032 ug/L		02/28/14 08:16	03/03/14 17:01	1
Aroclor-1260	0.10	U	0.10	0.038 ug/L		02/28/14 08:16	03/03/14 17:01	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	75		10 - 114			02/28/14 08:16	03/03/14 17:01	1
Tetrachloro-m-xylene	75		15 - 131			02/28/14 08:16	03/03/14 17:01	1

Lab Sample ID: LCS 240-121051/6-A

Matrix: Water

Analysis Batch: 121250

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121051

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.06		ug/L		82	50 - 114
Aroclor-1260	2.50	2.04		ug/L		81	8 - 127

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Lab Sample ID: LCS 240-121051/6-A

Matrix: Water

Analysis Batch: 121250

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121051

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	76		10 - 114
Tetrachloro-m-xylene	66		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-121019/1-A

Matrix: Water

Analysis Batch: 121174

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 121019

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	2.2 ug/L		02/28/14 06:48	03/03/14 14:43	1
Cadmium	2.0	U	2.0	0.66 ug/L		02/28/14 06:48	03/03/14 14:43	1
Chromium	5.0	U	5.0	2.2 ug/L		02/28/14 06:48	03/03/14 14:43	1
Copper	20	U	20	4.5 ug/L		02/28/14 06:48	03/03/14 14:43	1
Iron	100	U	100	81 ug/L		02/28/14 06:48	03/03/14 14:43	1
Nickel	20	U	20	3.2 ug/L		02/28/14 06:48	03/03/14 14:43	1
Lead	3.0	U	3.0	1.9 ug/L		02/28/14 06:48	03/03/14 14:43	1

Lab Sample ID: LCS 240-121019/2-A

Matrix: Water

Analysis Batch: 121174

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 121019

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	50.1		ug/L		100	85 - 115
Cadmium	50.0	51.3		ug/L		103	85 - 115
Chromium	200	200		ug/L		100	85 - 115
Copper	250	244		ug/L		97	85 - 115
Iron	1000	958		ug/L		96	85 - 115
Nickel	500	485		ug/L		97	85 - 115
Lead	500	462		ug/L		92	85 - 115

Lab Sample ID: 240-34549-2 MS

Matrix: Water

Analysis Batch: 121174

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total Recoverable

Prep Batch: 121019

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	5.0	U	50.0	54.9		ug/L		110	75 - 125
Cadmium	2.0	U	50.0	55.3		ug/L		111	75 - 125
Chromium	5.0	U	200	213		ug/L		107	75 - 125
Copper	20	U	250	262		ug/L		105	75 - 125
Iron	180		1000	1180		ug/L		101	75 - 125
Nickel	7.8	J	500	534		ug/L		105	75 - 125
Lead	3.0	U	500	481		ug/L		96	75 - 125

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Lab Sample ID: 240-34549-2 MSD

Matrix: Water

Analysis Batch: 121174

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total Recoverable

Prep Batch: 121019

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	52.0		ug/L		104	75 - 125	5	20
Cadmium	2.0	U	50.0	53.0		ug/L		106	75 - 125	4	20
Chromium	5.0	U	200	204		ug/L		102	75 - 125	4	20
Copper	20	U	250	250		ug/L		100	75 - 125	5	20
Iron	180		1000	1140		ug/L		96	75 - 125	4	20
Nickel	7.8	J	500	493		ug/L		97	75 - 125	8	20
Lead	3.0	U	500	460		ug/L		92	75 - 125	4	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-121020/1-A

Matrix: Water

Analysis Batch: 121437

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 121020

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12 ug/L		02/28/14 15:05	03/04/14 17:34	1

Lab Sample ID: LCS 240-121020/2-A

Matrix: Water

Analysis Batch: 121437

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121020

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.73		ug/L		95	85 - 115

Lab Sample ID: 240-34549-2 MS

Matrix: Water

Analysis Batch: 121437

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total/NA

Prep Batch: 121020

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.20	U	5.00	4.76		ug/L		95	70 - 130

Lab Sample ID: 240-34549-2 MSD

Matrix: Water

Analysis Batch: 121437

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total/NA

Prep Batch: 121020

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.20	U	5.00	4.68		ug/L		94	70 - 130	2	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-121341/1-A

Matrix: Water

Analysis Batch: 121355

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 121341

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	8.00	J	50	7.7 mg/L		03/04/14 09:34	03/04/14 09:34	1

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Lab Sample ID: LCS 240-121341/2-A

Matrix: Water

Analysis Batch: 121355

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	400	316		mg/L		79	78 - 114

Method: 350.2 - Nitrogen, Ammonia, Distillation

Lab Sample ID: MB 240-121190/1-A

Matrix: Water

Analysis Batch: 121245

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 121190

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	2.0	U	2.0	0.87 mg/L		03/03/14 07:00	03/03/14 14:15	1

Lab Sample ID: LCS 240-121190/2-A

Matrix: Water

Analysis Batch: 121245

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121190

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	10.1	9.98		mg/L		99	85 - 114

Lab Sample ID: 240-34549-1 MS

Matrix: Water

Analysis Batch: 121245

Client Sample ID: W-12610-022614-SSH-1402

Prep Type: Total/NA

Prep Batch: 121190

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	6.7		4.00	9.98		mg/L		83	75 - 125

Lab Sample ID: 240-34549-1 MSD

Matrix: Water

Analysis Batch: 121245

Client Sample ID: W-12610-022614-SSH-1402

Prep Type: Total/NA

Prep Batch: 121190

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	6.7		4.00	10.3		mg/L		90	75 - 125	3	20

Method: 410.4 - COD

Lab Sample ID: MB 240-121418/9

Matrix: Water

Analysis Batch: 121418

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	7.8 mg/L			03/04/14 10:45	1

Lab Sample ID: LCS 240-121418/10

Matrix: Water

Analysis Batch: 121418

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	103	94.5		mg/L		92	90 - 110

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-120972/2

Matrix: Water

Analysis Batch: 120972

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	6.47	6.540		SU		101	97 - 103

Lab Sample ID: 240-34549-2 DU

Matrix: Water

Analysis Batch: 120972

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.09	HF	8.080		SU		0.1	20

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

Lab Sample ID: MB 240-121064/1

Matrix: Water

Analysis Batch: 121064

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	1.8 mg/L			02/28/14 09:15	1

Lab Sample ID: LCS 240-121064/2

Matrix: Water

Analysis Batch: 121064

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	46.3	45.0		mg/L		97	73 - 113

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-121186/10-A

Matrix: Water

Analysis Batch: 121273

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 121186

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.014 mg/L		03/03/14 09:01	03/03/14 13:50	1

Lab Sample ID: LCS 240-121186/11-A

Matrix: Water

Analysis Batch: 121273

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.313	0.317		mg/L		101	53 - 134

Lab Sample ID: 240-34549-2 MS

Matrix: Water

Analysis Batch: 121273

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total/NA

Prep Batch: 121186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.20		0.500	0.685		mg/L		98	10 - 199

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Lab Sample ID: 240-34549-2 MSD

Matrix: Water

Analysis Batch: 121273

Client Sample ID: W-12610-022614-SSH-1403

Prep Type: Total/NA

Prep Batch: 121186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	0.20		0.500	0.708		mg/L		102	10 - 199	3	20

Method: SM5210B - BOD, 5 Day

Lab Sample ID: SB 490-145371/2

Matrix: Water

Analysis Batch: 145371

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SB Result	SB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0 mg/L			02/27/14 13:50	1

Lab Sample ID: SCB 490-145371/4

Matrix: Water

Analysis Batch: 145371

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0 mg/L			02/27/14 13:50	1

Lab Sample ID: USB 490-145371/1

Matrix: Water

Analysis Batch: 145371

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0 mg/L			02/27/14 13:50	1

Lab Sample ID: LCS 490-145371/3

Matrix: Water

Analysis Batch: 145371

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	3.96	4.20		mg/L		106	85 - 115

TestAmerica Canton

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (81-112)	12DCE (80-125)	TOL (84-110)
240-34549-2	W-12610-022614-SSH-1403	81	80	92
LCS 240-121265/25	Lab Control Sample	92	92	102
MB 240-121265/24	Method Blank	94	88	97
Surrogate Legend				
BFB = 4-Bromofluorobenzene (Surr)				
12DCE = 1,2-Dichloroethane-d4 (Surr)				
TOL = Toluene-d8 (Surr)				

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-114)	TCX2 (15-131)
240-34549-2	W-12610-022614-SSH-1403	89	65
LCS 240-121051/6-A	Lab Control Sample	76	66
MB 240-121051/5-A	Method Blank	75	75
Surrogate Legend			
DCB = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Client Sample ID: W-12610-022614-SSH-1402

Lab Sample ID: 240-34549-1

Date Collected: 02/26/14 13:30

Matrix: Water

Date Received: 02/27/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/Ammonia			121190	03/03/14 07:00	JAK	TAL CAN
Total/NA	Analysis	350.2		1	121245	03/03/14 14:22	JAK	TAL CAN

Client Sample ID: W-12610-022614-SSH-1403

Lab Sample ID: 240-34549-2

Date Collected: 02/26/14 16:10

Matrix: Water

Date Received: 02/27/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	121265	03/04/14 04:50	TJL1	TAL CAN
Total/NA	Prep	3520C			121051	02/28/14 08:16	CSC	TAL CAN
Total/NA	Analysis	608		1	121250	03/03/14 16:46	LSH	TAL CAN
Total Recoverable	Prep	200.7			121019	02/28/14 06:48	LPM	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	121174	03/03/14 14:51	NJT	TAL CAN
Total/NA	Prep	245.1			121020	02/28/14 15:05	LPM	TAL CAN
Total/NA	Analysis	245.1		1	121437	03/04/14 17:37	AMM2	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	120972	02/27/14 14:46	BLW	TAL CAN
Total/NA	Analysis	SM 2540D		1	121064	02/28/14 09:15	BLW	TAL CAN
Total/NA	Prep	Distill/Ammonia			121190	03/03/14 07:00	JAK	TAL CAN
Total/NA	Analysis	350.2		1	121245	03/03/14 14:27	JAK	TAL CAN
Total/NA	Prep	365.2/365.3/365			121186	03/03/14 09:01	BLW	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	121273	03/03/14 13:50	BLW	TAL CAN
Total/NA	Prep	1664A			121341	03/04/14 09:34	WAL	TAL CAN
Total/NA	Analysis	1664A		1	121355	03/04/14 09:34	WAL	TAL CAN
Total/NA	Analysis	410.4		1	121418	03/04/14 10:45	JAK	TAL CAN

Client Sample ID: W-12610-022614-SSH-1403

Lab Sample ID: 240-34549-3

Date Collected: 02/26/14 16:10

Matrix: Water

Date Received: 02/27/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM5210B		1	145371		AAP	TAL NSH
					(Start)	02/27/14 13:50		
					(End)	03/04/14 07:55		

Laboratory References:

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

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-34549-1

Laboratory: TestAmerica Canton

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

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

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-15
Alaska (UST)	State Program	10	UST-087	07-24-14
Arizona	State Program	9	AZ0473	05-05-14
Arizona	State Program	9	AZ0473	05-05-14 *
Arkansas DEQ	State Program	6	88-0737	04-25-14
California	NELAP	9	1168CA	10-31-14
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Connecticut	State Program	1	PH-0220	12-31-15
Florida	NELAP	4	E87358	06-30-14
Illinois	NELAP	5	200010	12-09-14
Iowa	State Program	7	131	05-01-14
Kansas	NELAP	7	E-10229	10-31-14
Kentucky (UST)	State Program	4	19	06-30-14
Louisiana	NELAP	6	30613	06-30-14
Maryland	State Program	3	316	03-31-14
Massachusetts	State Program	1	M-TN032	06-30-14
Minnesota	NELAP	5	047-999-345	12-31-14
Mississippi	State Program	4	N/A	06-30-14
Montana (UST)	State Program	8	NA	01-01-20
Nevada	State Program	9	TN00032	07-31-14
New Hampshire	NELAP	1	2963	10-10-14
New Jersey	NELAP	2	TN965	06-30-14
New York	NELAP	2	11342	04-01-14
North Carolina DENR	State Program	4	387	12-31-14
North Dakota	State Program	8	R-146	06-30-14

* Expired certification is currently pending renewal and is considered valid.

TestAmerica Canton

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

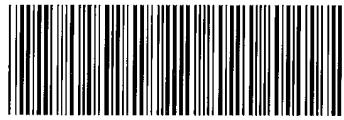
TestAmerica Job ID: 240-34549-1

Laboratory: TestAmerica Nashville (Continued)

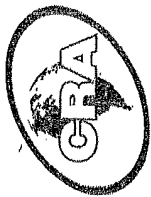
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Ohio VAP	State Program	5	CL0033	10-16-15
Oklahoma	State Program	6	9412	08-31-14
Oregon	NELAP	10	TN200001	04-29-14
Pennsylvania	NELAP	3	68-00585	06-30-14
Rhode Island	State Program	1	LAO00268	12-30-14
South Carolina	State Program	4	84009 (002)	03-23-15
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077-09-TX	08-31-14
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-14
Virginia	NELAP	3	460152	06-14-14
Washington	State Program	10	C789	07-19-14
West Virginia DEP	State Program	3	219	03-31-14
Wisconsin	State Program	5	998020430	08-31-14
Wyoming (UST)	A2LA	8	453.07	12-31-15

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-34549 Chain of Custody



CONESTOGA-ROVERS
& ASSOCIATES

CHAIN OF CUSTODY RECORD

14496 Sheldon Road, Suite #200, Plymouth, Michigan 48170

Phone: (734) 453-5123

Fax: (734) 453-5201

COC NO: **PL-12002**

PAGE **1** OF **1**

(See Reverse Side for Instructions)

Project No./Phase/Task Code: 12610-T01-001414		Laboratory Name: Test America		Lab Location: North Canton OH		SSOW ID: 12610-T03-008	
Project Name: Racer Bay City		Lab Contact: D. Hecker		Lab Quote No:		Cooler No:	
Project Location: Bay City, MI		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier: FedEx	
Chemistry Contact: R. Fleisher		SAMPLE TYPE		Total Containers/Sample		Airbill No: 904406721040	
Sampler(s): S. Hovemeier		(see back of COC)		Other:		Date Shipped: 2/26/14	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yy)		TIME (hh:mm)		COMMENTS/ SPECIAL INSTRUCTIONS:	
1 W-12610-022614-SS4-14029		2/26/14		1330		PCBs	
2 W-12610-022614-SS4-14032		2/26/14		1610		HEM	
3						Vinyl chloride	
4						TSS	
5						I. Phosphorus	
6						PH₂-N	
7						Metals *	
8							
9							
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15							
MS/MSD Request							
TAT Required in business days (use separate COCs for different TATs):		Total Number of Containers: 14		Notes/ Special Requirements:			
☐ 1 Day ☐ 2 Days ☐ 3 Days ☒ 1 Week ☐ 2 Week ☐ Other:		All Samples in Cooler must be on COC		MSD sent to TA - Nashville			
RELINQUISHED BY		DATE		RECEIVED BY		DATE	
1. ATA Hovemeier		2/26/14		1. Che Hovemeier		2/27/14	
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

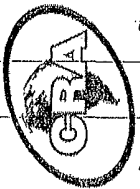
Distribution: WHITE - Fully Executed Copy (CRA)

YELLOW - Receiving Laboratory Copy

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form, COC-10A (20110804)



CONESTOGA-ROVERS
& ASSOCIATES

CHAIN OF CUSTODY RECORD

14496 Sheldon Road, Suite #100, Plymouth, Michigan 48170
Phone: (734) 453-5123 Fax: (734) 453-5201

COC NO.: PL-12001

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/Phase/Task Code: 022614-SSH-1403-212614/1610		Laboratory Name: Test America		Lab Location: Nashville, TN		SSOW ID: 12610-503-008	
Project Name: Raccoon Bay City, MT		Lab Contact: D. H. H. H.		Lab Quote No.:		Cooler No.:	
Project Location: Raccoon Bay City, MT		Chemistry Contact: R. H. H. H.		Analysis Requested: (See Back of COC for Definitions)		Carrier: FedEx	
Sampler(s): R. H. H. H.		Sample Type: (See Back of COC)		Container Quantity & Preservation:		Airbill No.:	
SAMPLE IDENTIFICATION		DATE		TIME		Date Shipped:	
1 W-022614-SSH-1403-212614/1610		WT		C		2/26/14	
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TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 34549

Client <u>LA</u>	Site Name _____	Cooler unpacked by: <u>Ch Lyail</u>
Cooler Received on <u>2/27/14</u>	Opened on <u>2/27/14</u>	
FedEx: 1 st Grd ☒ UPS ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____		
TestAmerica Cooler # <u>TAMISVC</u> Foam Box ☐ Client Cooler ☐ Box ☐ Other _____		
Packing material used: <u>Bubble Wrap</u> Foam ☐ Plastic Bag ☐ None ☐ Other _____		
COOLANT: <u>Water</u> Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐		
1. Cooler temperature upon receipt IR GUN# A (CF +0 °C) Observed Cooler Temp. <u>2.2</u> °C Corrected Cooler Temp. <u>2.2</u> °C IR GUN# 4 (CF -1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C IR GUN# 5 (CF +1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C IR GUN# 8 (CF +1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C		
☐ See Multiple Cooler Form		
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes ☒ No ☐ -Were custody seals on the outside of the cooler(s) signed & dated? Yes ☐ No ☒ -Were custody seals on the bottle(s)? Yes ☐ No ☒		
3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☐ No		
4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No		
5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No		
6. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No		
7. Could all bottle labels be reconciled with the COC? ☒ Yes ☐ No		
8. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No		
9. Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No		
10. Were sample(s) at the correct pH upon receipt? ☒ Yes ☐ No NA pH Strip Lot# <u>HC391982</u>		
11. Were VOAs on the COC? ☒ Yes ☐ No		
12. Were air bubbles >6 mm in any VOA vials? ☐ Yes ☒ No NA		
13. Was a trip blank present in the cooler(s)? ☐ Yes ☒ No		
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____ Concerning _____		

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Ch Lyail

15. SAMPLE CONDITION

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

16. SAMPLE PRESERVATION

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

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Preservative</u> <u>Added (mls)</u>	<u>Lot #</u>
W-12610-022614-SSH-1402	240-34549-A-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-022614-SSH-1403	240-34549-F-2	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-022614-SSH-1403	240-34549-G-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-022614-SSH-1403	240-34549-L-2	Amber Glass 1 liter - Sulfuric Acid	<2	_____	_____
W-12610-022614-SSH-1403	240-34549-M-2	Amber Glass 1 liter - Sulfuric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-34549-1

Login Number: 34549

List Number: 1

Creator: Ford, Easton

List Source: TestAmerica Nashville

List Creation: 02/27/14 01:07 PM

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

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: 240-40439-1

Client Project/Site: 12610-T04, RACER Bay City

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

8/19/2014 10:50:07 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

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

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

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QC Sample Results 20

Surrogate Summary 22

Lab Chronicle 23

Certification Summary 25

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Job ID: 240-40439-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12610-T04, RACER Bay City

Report Number: 240-40439-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 08/07/2014; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.4° C, 2.2° C and 2.8° C.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples GW-12610-080514-SSH-1401 (240-40439-1), GW-12610-080514-SSH-1402 (240-40439-2), GW-12610-080614-SSH-1403 (240-40439-3), GW-12610-080614-SSH-1404 (240-40439-4), GW-12610-080614-SSH-1405 (240-40439-5), GW-12610-080614-SSH-1406 (240-40439-6), GW-12610-080614-SSH-1407 (240-40439-7), GW-12610-080614-SSH-1408 (240-40439-8), GW-12610-080614-SSH-1409 (240-40439-9) and GW-12610-080614-SSH-1410 (240-40439-10) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 08/08/2014 and 08/13/2014 and analyzed on 08/11/2014, 08/12/2014 and 08/14/2014.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: GW-12610-080514-SSH-1402 (240-40439-2), GW-12610-080614-SSH-1403 (240-40439-3). The samples has been quantified and reported as Aroclor 1242. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Job ID: 240-40439-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

associated with this result.

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for GW-12610-080514-SSH-1401 (240-40439-1). Re-extraction was performed with concurring results. The original analysis has been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batches 142577 and 143101.

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

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Qualifiers

GC Semi VOA

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

Glossary

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

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-40439-1	GW-12610-080514-SSH-1401	Water	08/05/14 15:00	08/07/14 09:20
240-40439-2	GW-12610-080514-SSH-1402	Water	08/05/14 14:30	08/07/14 09:20
240-40439-3	GW-12610-080614-SSH-1403	Water	08/06/14 08:26	08/07/14 09:20
240-40439-4	GW-12610-080614-SSH-1404	Water	08/06/14 09:36	08/07/14 09:20
240-40439-5	GW-12610-080614-SSH-1405	Water	08/06/14 10:51	08/07/14 09:20
240-40439-6	GW-12610-080614-SSH-1406	Water	08/06/14 11:00	08/07/14 09:20
240-40439-7	GW-12610-080614-SSH-1407	Water	08/06/14 12:16	08/07/14 09:20
240-40439-8	GW-12610-080614-SSH-1408	Water	08/06/14 13:31	08/07/14 09:20
240-40439-9	GW-12610-080614-SSH-1409	Water	08/06/14 14:41	08/07/14 09:20
240-40439-10	GW-12610-080614-SSH-1410	Water	08/06/14 15:56	08/07/14 09:20

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Client Sample ID: GW-12610-080514-SSH-1401

Lab Sample ID: 240-40439-1

No Detections.

Client Sample ID: GW-12610-080514-SSH-1402

Lab Sample ID: 240-40439-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.68		0.19	0.057	ug/L	1		8082	Total/NA

Client Sample ID: GW-12610-080614-SSH-1403

Lab Sample ID: 240-40439-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.41		0.19	0.057	ug/L	1		8082	Total/NA

Client Sample ID: GW-12610-080614-SSH-1404

Lab Sample ID: 240-40439-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.13	J	0.19	0.057	ug/L	1		8082	Total/NA

Client Sample ID: GW-12610-080614-SSH-1405

Lab Sample ID: 240-40439-5

No Detections.

Client Sample ID: GW-12610-080614-SSH-1406

Lab Sample ID: 240-40439-6

No Detections.

Client Sample ID: GW-12610-080614-SSH-1407

Lab Sample ID: 240-40439-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.10	J	0.19	0.058	ug/L	1		8082	Total/NA

Client Sample ID: GW-12610-080614-SSH-1408

Lab Sample ID: 240-40439-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1.0		0.19	0.059	ug/L	1		8082	Total/NA

Client Sample ID: GW-12610-080614-SSH-1409

Lab Sample ID: 240-40439-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.065	J	0.19	0.057	ug/L	1		8082	Total/NA

Client Sample ID: GW-12610-080614-SSH-1410

Lab Sample ID: 240-40439-10

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080514-SSH-1401

Date Collected: 08/05/14 15:00

Date Received: 08/07/14 09:20

Lab Sample ID: 240-40439-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/12/14 15:07	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/12/14 15:07	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/12/14 15:07	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/12/14 15:07	1
Aroclor-1248	0.19	U	0.19	0.059	ug/L		08/08/14 07:03	08/12/14 15:07	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		08/08/14 07:03	08/12/14 15:07	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		08/08/14 07:03	08/12/14 15:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	41		23 - 136				08/08/14 07:03	08/12/14 15:07	1
DCB Decachlorobiphenyl	7	X	10 - 130				08/08/14 07:03	08/12/14 15:07	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080514-SSH-1402

Date Collected: 08/05/14 14:30

Date Received: 08/07/14 09:20

Lab Sample ID: 240-40439-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 17:33	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 17:33	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 17:33	1
Aroclor-1242	0.68		0.19	0.057	ug/L		08/08/14 07:03	08/11/14 17:33	1
Aroclor-1248	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 17:33	1
Aroclor-1254	0.19	U	0.19	0.030	ug/L		08/08/14 07:03	08/11/14 17:33	1
Aroclor-1260	0.19	U	0.19	0.036	ug/L		08/08/14 07:03	08/11/14 17:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		23 - 136				08/08/14 07:03	08/11/14 17:33	1
DCB Decachlorobiphenyl	12		10 - 130				08/08/14 07:03	08/11/14 17:33	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1403

Lab Sample ID: 240-40439-3

Date Collected: 08/06/14 08:26

Matrix: Water

Date Received: 08/07/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 17:47	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 17:47	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 17:47	1
Aroclor-1242	0.41		0.19	0.057	ug/L		08/08/14 07:03	08/11/14 17:47	1
Aroclor-1248	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 17:47	1
Aroclor-1254	0.19	U	0.19	0.030	ug/L		08/08/14 07:03	08/11/14 17:47	1
Aroclor-1260	0.19	U	0.19	0.036	ug/L		08/08/14 07:03	08/11/14 17:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	62		23 - 136	08/08/14 07:03	08/11/14 17:47	1
DCB Decachlorobiphenyl	18		10 - 130	08/08/14 07:03	08/11/14 17:47	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1404

Date Collected: 08/06/14 09:36

Date Received: 08/07/14 09:20

Lab Sample ID: 240-40439-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 18:02	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 18:02	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 18:02	1
Aroclor-1242	0.13	J	0.19	0.057	ug/L		08/08/14 07:03	08/11/14 18:02	1
Aroclor-1248	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 18:02	1
Aroclor-1254	0.19	U	0.19	0.030	ug/L		08/08/14 07:03	08/11/14 18:02	1
Aroclor-1260	0.19	U	0.19	0.036	ug/L		08/08/14 07:03	08/11/14 18:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	48		23 - 136				08/08/14 07:03	08/11/14 18:02	1
DCB Decachlorobiphenyl	20		10 - 130				08/08/14 07:03	08/11/14 18:02	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1405

Lab Sample ID: 240-40439-5

Date Collected: 08/06/14 10:51

Matrix: Water

Date Received: 08/07/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 18:16	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 18:16	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 18:16	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 18:16	1
Aroclor-1248	0.19	U	0.19	0.059	ug/L		08/08/14 07:03	08/11/14 18:16	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		08/08/14 07:03	08/11/14 18:16	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		08/08/14 07:03	08/11/14 18:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		23 - 136				08/08/14 07:03	08/11/14 18:16	1
DCB Decachlorobiphenyl	33		10 - 130				08/08/14 07:03	08/11/14 18:16	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1406

Lab Sample ID: 240-40439-6

Date Collected: 08/06/14 11:00

Matrix: Water

Date Received: 08/07/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 18:30	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 18:30	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 18:30	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		08/08/14 07:03	08/11/14 18:30	1
Aroclor-1248	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 18:30	1
Aroclor-1254	0.19	U	0.19	0.030	ug/L		08/08/14 07:03	08/11/14 18:30	1
Aroclor-1260	0.19	U	0.19	0.036	ug/L		08/08/14 07:03	08/11/14 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		23 - 136	08/08/14 07:03	08/11/14 18:30	1
DCB Decachlorobiphenyl	34		10 - 130	08/08/14 07:03	08/11/14 18:30	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1407

Date Collected: 08/06/14 12:16

Date Received: 08/07/14 09:20

Lab Sample ID: 240-40439-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/13/14 07:01	08/14/14 15:05	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/13/14 07:01	08/14/14 15:05	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/13/14 07:01	08/14/14 15:05	1
Aroclor-1242	0.10	J	0.19	0.058	ug/L		08/13/14 07:01	08/14/14 15:05	1
Aroclor-1248	0.19	U	0.19	0.059	ug/L		08/13/14 07:01	08/14/14 15:05	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		08/13/14 07:01	08/14/14 15:05	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		08/13/14 07:01	08/14/14 15:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		23 - 136				08/13/14 07:01	08/14/14 15:05	1
DCB Decachlorobiphenyl	21		10 - 130				08/13/14 07:01	08/14/14 15:05	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1408

Lab Sample ID: 240-40439-8

Date Collected: 08/06/14 13:31

Matrix: Water

Date Received: 08/07/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 18:59	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 18:59	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 18:59	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 18:59	1
Aroclor-1248	1.0		0.19	0.059	ug/L		08/08/14 07:03	08/11/14 18:59	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		08/08/14 07:03	08/11/14 18:59	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		08/08/14 07:03	08/11/14 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		23 - 136				08/08/14 07:03	08/11/14 18:59	1
DCB Decachlorobiphenyl	50		10 - 130				08/08/14 07:03	08/11/14 18:59	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1409

Lab Sample ID: 240-40439-9

Date Collected: 08/06/14 14:41

Matrix: Water

Date Received: 08/07/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		08/08/14 07:03	08/11/14 19:12	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 19:12	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		08/08/14 07:03	08/11/14 19:12	1
Aroclor-1242	0.065	J	0.19	0.057	ug/L		08/08/14 07:03	08/11/14 19:12	1
Aroclor-1248	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 19:12	1
Aroclor-1254	0.19	U	0.19	0.030	ug/L		08/08/14 07:03	08/11/14 19:12	1
Aroclor-1260	0.19	U	0.19	0.036	ug/L		08/08/14 07:03	08/11/14 19:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	65		23 - 136				08/08/14 07:03	08/11/14 19:12	1
DCB Decachlorobiphenyl	24		10 - 130				08/08/14 07:03	08/11/14 19:12	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Client Sample ID: GW-12610-080614-SSH-1410

Date Collected: 08/06/14 15:56

Date Received: 08/07/14 09:20

Lab Sample ID: 240-40439-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.043	ug/L		08/08/14 07:03	08/11/14 19:27	1
Aroclor-1221	0.19	U	0.19	0.044	ug/L		08/08/14 07:03	08/11/14 19:27	1
Aroclor-1232	0.19	U	0.19	0.071	ug/L		08/08/14 07:03	08/11/14 19:27	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		08/08/14 07:03	08/11/14 19:27	1
Aroclor-1248	0.19	U	0.19	0.059	ug/L		08/08/14 07:03	08/11/14 19:27	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		08/08/14 07:03	08/11/14 19:27	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		08/08/14 07:03	08/11/14 19:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		23 - 136				08/08/14 07:03	08/11/14 19:27	1
DCB Decachlorobiphenyl	53		10 - 130				08/08/14 07:03	08/11/14 19:27	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

GC Semi VOA

Prep Batch: 142011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-40439-1	GW-12610-080514-SSH-1401	Total/NA	Water	3520C	
240-40439-2	GW-12610-080514-SSH-1402	Total/NA	Water	3520C	
240-40439-3	GW-12610-080614-SSH-1403	Total/NA	Water	3520C	
240-40439-4	GW-12610-080614-SSH-1404	Total/NA	Water	3520C	
240-40439-5	GW-12610-080614-SSH-1405	Total/NA	Water	3520C	
240-40439-6	GW-12610-080614-SSH-1406	Total/NA	Water	3520C	
240-40439-8	GW-12610-080614-SSH-1408	Total/NA	Water	3520C	
240-40439-9	GW-12610-080614-SSH-1409	Total/NA	Water	3520C	
240-40439-10	GW-12610-080614-SSH-1410	Total/NA	Water	3520C	
240-40439-10 MS	GW-12610-080614-SSH-1410	Total/NA	Water	3520C	
240-40439-10 MSD	GW-12610-080614-SSH-1410	Total/NA	Water	3520C	
LCS 240-142011/16-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-142011/15-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 142336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-40439-2	GW-12610-080514-SSH-1402	Total/NA	Water	8082	142011
240-40439-3	GW-12610-080614-SSH-1403	Total/NA	Water	8082	142011
240-40439-4	GW-12610-080614-SSH-1404	Total/NA	Water	8082	142011
240-40439-5	GW-12610-080614-SSH-1405	Total/NA	Water	8082	142011
240-40439-6	GW-12610-080614-SSH-1406	Total/NA	Water	8082	142011
240-40439-8	GW-12610-080614-SSH-1408	Total/NA	Water	8082	142011
240-40439-9	GW-12610-080614-SSH-1409	Total/NA	Water	8082	142011
240-40439-10	GW-12610-080614-SSH-1410	Total/NA	Water	8082	142011
240-40439-10 MS	GW-12610-080614-SSH-1410	Total/NA	Water	8082	142011
240-40439-10 MSD	GW-12610-080614-SSH-1410	Total/NA	Water	8082	142011
LCS 240-142011/16-A	Lab Control Sample	Total/NA	Water	8082	142011
MB 240-142011/15-A	Method Blank	Total/NA	Water	8082	142011

Analysis Batch: 142445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-40439-1	GW-12610-080514-SSH-1401	Total/NA	Water	8082	142011

Prep Batch: 142577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-40439-7	GW-12610-080614-SSH-1407	Total/NA	Water	3520C	
LCS 240-142577/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-142577/2-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 142745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-40439-7	GW-12610-080614-SSH-1407	Total/NA	Water	8082	142577
LCS 240-142577/3-A	Lab Control Sample	Total/NA	Water	8082	142577
MB 240-142577/2-A	Method Blank	Total/NA	Water	8082	142577

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Lab Sample ID: MB 240-142011/15-A

Matrix: Water

Analysis Batch: 142336

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 142011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.044	ug/L		08/08/14 07:03	08/11/14 20:10	1
Aroclor-1221	0.20	U	0.20	0.045	ug/L		08/08/14 07:03	08/11/14 20:10	1
Aroclor-1232	0.20	U	0.20	0.073	ug/L		08/08/14 07:03	08/11/14 20:10	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		08/08/14 07:03	08/11/14 20:10	1
Aroclor-1248	0.20	U	0.20	0.061	ug/L		08/08/14 07:03	08/11/14 20:10	1
Aroclor-1254	0.20	U	0.20	0.032	ug/L		08/08/14 07:03	08/11/14 20:10	1
Aroclor-1260	0.20	U	0.20	0.038	ug/L		08/08/14 07:03	08/11/14 20:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		23 - 136	08/08/14 07:03	08/11/14 20:10	1
DCB Decachlorobiphenyl	93		10 - 130	08/08/14 07:03	08/11/14 20:10	1

Lab Sample ID: LCS 240-142011/16-A

Matrix: Water

Analysis Batch: 142336

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 142011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.41		ug/L		97	66 - 120
Aroclor-1260	2.50	2.17		ug/L		87	55 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	71		23 - 136
DCB Decachlorobiphenyl	71		10 - 130

Lab Sample ID: 240-40439-10 MS

Matrix: Water

Analysis Batch: 142336

Client Sample ID: GW-12610-080614-SSH-1410

Prep Type: Total/NA

Prep Batch: 142011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	0.19	U	2.40	2.04		ug/L		85	67 - 120
Aroclor-1260	0.19	U	2.40	1.86		ug/L		77	31 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	71		23 - 136
DCB Decachlorobiphenyl	55		10 - 130

Lab Sample ID: 240-40439-10 MSD

Matrix: Water

Analysis Batch: 142336

Client Sample ID: GW-12610-080614-SSH-1410

Prep Type: Total/NA

Prep Batch: 142011

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Aroclor-1016	0.19	U	2.40	2.25		ug/L		94	67 - 120	10	30
Aroclor-1260	0.19	U	2.40	2.05		ug/L		85	31 - 120	9	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	80		23 - 136
DCB Decachlorobiphenyl	58		10 - 130

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Lab Sample ID: MB 240-142577/2-A

Matrix: Water

Analysis Batch: 142745

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 142577

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.044	ug/L		08/13/14 07:01	08/14/14 15:20	1
Aroclor-1221	0.20	U	0.20	0.045	ug/L		08/13/14 07:01	08/14/14 15:20	1
Aroclor-1232	0.20	U	0.20	0.073	ug/L		08/13/14 07:01	08/14/14 15:20	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		08/13/14 07:01	08/14/14 15:20	1
Aroclor-1248	0.20	U	0.20	0.061	ug/L		08/13/14 07:01	08/14/14 15:20	1
Aroclor-1254	0.20	U	0.20	0.032	ug/L		08/13/14 07:01	08/14/14 15:20	1
Aroclor-1260	0.20	U	0.20	0.038	ug/L		08/13/14 07:01	08/14/14 15:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		23 - 136	08/13/14 07:01	08/14/14 15:20	1
DCB Decachlorobiphenyl	82		10 - 130	08/13/14 07:01	08/14/14 15:20	1

Lab Sample ID: LCS 240-142577/3-A

Matrix: Water

Analysis Batch: 142745

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 142577

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.39		ug/L		95	66 - 120
Aroclor-1260	2.50	2.52		ug/L		101	55 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	87		23 - 136
DCB Decachlorobiphenyl	85		10 - 130

TestAmerica Canton

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX2 (23-136)	DCB2 (10-130)
240-40439-1	GW-12610-080514-SSH-1401	41	7 X
240-40439-2	GW-12610-080514-SSH-1402	66	12
240-40439-3	GW-12610-080614-SSH-1403	62	18
240-40439-4	GW-12610-080614-SSH-1404	48	20
240-40439-5	GW-12610-080614-SSH-1405	81	33
240-40439-6	GW-12610-080614-SSH-1406	78	34
240-40439-7	GW-12610-080614-SSH-1407	60	21
240-40439-8	GW-12610-080614-SSH-1408	73	50
240-40439-9	GW-12610-080614-SSH-1409	65	24
240-40439-10	GW-12610-080614-SSH-1410	69	53
240-40439-10 MS	GW-12610-080614-SSH-1410	71	55
240-40439-10 MSD	GW-12610-080614-SSH-1410	80	58
LCS 240-142011/16-A	Lab Control Sample	71	71
LCS 240-142577/3-A	Lab Control Sample	87	85
MB 240-142011/15-A	Method Blank	75	93
MB 240-142577/2-A	Method Blank	87	82

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Client Sample ID: GW-12610-080514-SSH-1401

Lab Sample ID: 240-40439-1

Date Collected: 08/05/14 15:00

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142445	08/12/14 15:07	LSH	TAL CAN

Client Sample ID: GW-12610-080514-SSH-1402

Lab Sample ID: 240-40439-2

Date Collected: 08/05/14 14:30

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 17:33	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1403

Lab Sample ID: 240-40439-3

Date Collected: 08/06/14 08:26

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 17:47	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1404

Lab Sample ID: 240-40439-4

Date Collected: 08/06/14 09:36

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 18:02	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1405

Lab Sample ID: 240-40439-5

Date Collected: 08/06/14 10:51

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 18:16	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1406

Lab Sample ID: 240-40439-6

Date Collected: 08/06/14 11:00

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 18:30	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Client Sample ID: GW-12610-080614-SSH-1407

Lab Sample ID: 240-40439-7

Date Collected: 08/06/14 12:16

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142577	08/13/14 07:01	CSC	TAL CAN
Total/NA	Analysis	8082		1	142745	08/14/14 15:05	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1408

Lab Sample ID: 240-40439-8

Date Collected: 08/06/14 13:31

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 18:59	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1409

Lab Sample ID: 240-40439-9

Date Collected: 08/06/14 14:41

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 19:12	LSH	TAL CAN

Client Sample ID: GW-12610-080614-SSH-1410

Lab Sample ID: 240-40439-10

Date Collected: 08/06/14 15:56

Matrix: Water

Date Received: 08/07/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			142011	08/08/14 07:03	CSC	TAL CAN
Total/NA	Analysis	8082		1	142336	08/11/14 19:27	LSH	TAL CAN

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-40439-1

Laboratory: TestAmerica Canton

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

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

* Certification renewal pending - certification considered valid.

TestAmerica Canton

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-40439 Chain of Custody



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

14496 Sheldon Road,
Suite #200, Plymouth, Michigan 48170
Phone: (734) 453-5123 Fax: (734) 453-5201

COC NO.: **PL-12711**
2, 2, 1, 4, 2, 8 PAGE **1** OF **1**
(See Reverse Side for Instructions)

Project No/Phase/Task Code: 12610-T07-001714		Laboratory Name: TestAmerica		Lab Location: North Canton, OH		SSOW ID: 12610-T07-010	
Project Name: Racer Bay City		Lab Contact: D		Lab Quote No:		Cooler No:	
Project Location: Bay City, MI		SAMPLE TYPE: Grab (G) or Comp (C)		CONTAINER QUANTITY & PRESERVATION		Carrier: FedEx	
Chemistry Contact: R. Fleisher		Matrix Code (see back of COC)		Unpreserved		ANALYSIS REQUESTED (See Back of COC for Definitions)	
Sampler(s): S. Hoewemeyer		DATE (mm/dd/yyyy)		TIME (hh:mm)		Airbill No: 9044 0672 0949	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yyyy)		TIME (hh:mm)		Date Shipped: 8/6/14	
1 GW-12610-080514-SSA-1401		8/5/14		1500		MS/MSD Request	
2 GW-12610-080514-SSA-1402		8/5/14		1430		COMMENTS/ SPECIAL INSTRUCTIONS:	
3 GW-12610-080614-SSA-1403		8/6/14		0826			
4 [] -1404		[]		0936			
5 [] -1405		[]		1051			
6 [] -1406		[]		1100			
7 [] -1407		[]		1216			
8 [] -1408		[]		1331			
9 [] -1409		[]		1441			
10 GW-12610-080614-SSA-1410		8/6/14		1556		X ms/usa	
1 []		[]		[]			
2 []		[]		[]			
3 []		[]		[]			
4 []		[]		[]			
5 []		[]		[]			
TAT Required in business days (use separate COCs for different TATs):		DATE		TIME		Notes/ Special Requirements:	
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:		DATE		TIME			
RELINQUISHED BY AKA [Signature]		COMPANY CRA		RECEIVED BY [Signature]		COMPANY TA	
1. []		8/6/14		1700		DATE 8-7-14	
2. []		[]		[]		TIME 920	
3. []		[]		[]			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE -- Fully Executed Copy (CRA)

YELLOW -- Receiving Laboratory Copy

PINK -- Shipper

GOLDENROD -- Sampling Crew

CRA Form: COC-10A (2011/804)



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 40439

Client <u>CRA</u>	Site Name _____	Cooler unpacked by: <u>[Signature]</u>
Cooler Received on <u>6-7-14</u>	Opened on <u>8-7-14</u>	
FedEx: 1 st Grd <u>Exp</u> UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____		
TestAmerica Cooler # _____ Foam Box Client Cooler Box <u>Other</u> _____		
Packing material used: <u>Bubble Wrap</u> Foam Plastic Bag None Other _____		
COOLANT: <u>Wet Ice</u> Blue Ice Dry Ice Water None		
1. Cooler temperature upon receipt		
IR GUN# A (CF +2 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 4 (CF -2 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 5 (CF 0 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 8 (CF 0 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
		☒ See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes <u>No</u>		
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No <u>NA</u>		
-Were custody seals on the bottle(s)? Yes <u>No</u>		
3. Shippers' packing slip attached to the cooler(s)? <u>Yes</u> No		
4. Did custody papers accompany the sample(s)? <u>Yes</u> No		
5. Were the custody papers relinquished & signed in the appropriate place? <u>Yes</u> No		
6. Did all bottles arrive in good condition (Unbroken)? Yes <u>No</u>		
7. Could all bottle labels be reconciled with the COC? <u>Yes</u> No		
8. Were correct bottle(s) used for the test(s) indicated? <u>Yes</u> No		
9. Sufficient quantity received to perform indicated analyses? <u>Yes</u> No		
10. Were sample(s) at the correct pH upon receipt? Yes No <u>NA</u> pH Strip Lot# <u>HC412469</u>		
11. Were VOAs on the COC? Yes <u>No</u>		
12. Were air bubbles >6 mm in any VOA vials? Yes No <u>NA</u>		
13. Was a trip blank present in the cooler(s)? Yes <u>No</u>		
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

ADS

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) 1x2 1405 were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

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

[illegible]



**CONESTOGA-ROVERS
& ASSOCIATES**

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: 734-453-5123 Fax: 734-453-5201
www.CRAworld.com

MEMORANDUM

TO: Mike Tomka
FROM: *df-jar*
Ruth Mickle/tl/22/Det
RE: **Analytical Results and Reduced Validation
2014 Semi-annual Groundwater Sampling
RACER Bay City Site
Bay City, Michigan
August 2014**

REF. NO.: 012610-T04
DATE: September 26, 2014

1.0 Introduction

The following document details a reduced validation of analytical results for water samples collected in support of the Semi-annual Groundwater sampling at the Bay City Site during August 2014. Samples were submitted to TestAmerica, located in North Canton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Conestoga--Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, duplicate data, recovery data from surrogate spikes, laboratory control samples (LCS), and matrix spikes; and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-08-01, June 2008

Items i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 2. The sample chain of custody document and analytical report were used to determine sample holding times. The samples were prepared and/or analyzed within the specified holding time periods.

CRA MEMORANDUM

All samples were properly preserved and delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries

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

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

Surrogate recoveries were assessed against laboratory control limits. A surrogate recovery below 10% for decachlorobiphenyl was reported for sample GW-12610-080514-SSH-1401. Associated non-detect results were qualified as rejected, as noted in Table 4. The remaining surrogate recovery data were within acceptance criteria.

5.0 Laboratory Control Sample Analyses

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

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

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

CRA MEMORANDUM

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

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

The MS/MSD samples were spiked with the compounds specified in the method. The MS/MSD recoveries and RPDs were within laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7.0 Field QA/QC Samples

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

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected for each month's sampling event and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL.

The field duplicate results were all nondetect. Since the duplicate results were nondetect, an assessment of precision based on RPD data was not possible.

8.0 Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and pattern recognition were evaluated according to identification criteria established by the method. With two exceptions, the organic compounds reported adhered to the specified identification criteria. The laboratory reported that samples GW-12610-080514-SSH-1402 and GW-12610-080514-SSH-1403 yielded a detection for Aroclor-1242 that was a poor match with standards, resulting in quantitative and qualitative uncertainty. The laboratory attributed the poor match to excessive sample weathering. Based on this, the Aroclor-1242 detections for samples GW-12610-080514-SSH-1402 and GW-12610-080514-SSH-1403 were qualified estimated (J), as noted in Table 5.

CRA MEMORANDUM

9.0 Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

10.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific exceptions and qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
2014 SEMI-ANNUAL GROUNDWATER SAMPLING
RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014

<i>Sample Identification</i>	<i>Location</i>	<i>Matrix</i>	<i>Collection Date (mm/dd/yyyy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>	<i>Comments</i>
TestAmerica SDG No.: 240-40439-1						
GW-12610-080514-SSH-1401	MSA GW Ext. Sys. Discharge	water	8/5/2014	15:00	TCL PCBs	Field Duplicate of -1405
GW-12610-080514-SSH-1402	CSA GW Ext. Sys. Discharge	water	8/5/2014	14:30	TCL PCBs	
GW-12610-080614-SSH-1403	MW102D1	water	8/6/2014	8:26	TCL PCBs	
GW-12610-080614-SSH-1404	MW102D2	water	8/6/2014	9:36	TCL PCBs	
GW-12610-080614-SSH-1405	MW102D4	water	8/6/2014	10:51	TCL PCBs	
GW-12610-080614-SSH-1406	MW102D4	water	8/6/2014	11:00	TCL PCBs	
GW-12610-080614-SSH-1407	MW300S	water	8/6/2014	12:16	TCL PCBs	
GW-12610-080614-SSH-1408	LMW13S	water	8/6/2014	13:31	TCL PCBs	
GW-12610-080614-SSH-1409	LMW15D	water	8/6/2014	14:41	TCL PCBs	
GW-12610-080614-SSH-1410	MW301D2	water	8/6/2014	15:56	TCL PCBs	
						MS/MSD

Notes:

MS/MSD - Matrix Spike/Matrix Spike Duplicate
 PCBs - Polychlorinated Biphenyls
 TCL - Target Compound List

TABLE 2

VALIDATED ANALYTICAL SUMMARY RESULTS

RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014

Sample Location:	CSA GW Ext. Sys. Discharge	LMW13S	LMW15D	MSA GW Ext. Sys. Discharge
Sample ID:	GW-12610-080514-SSH-1402	GW-12610-080614-SSH-1408	GW-12610-080614-SSH-1409	GW-12610-080514-SSH-1401
Sample Date:	8/5/2014	8/6/2014	8/6/2014	8/5/2014
Parameters:	Units			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	0.68 J	0.19 U	0.065 J	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U	1.0	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U	0.19 U	0.19 U	R
Aroclor-1260 (PCB-1260)	0.19 U	0.19 U	0.19 U	R

TABLE 2

VALIDATED ANALYTICAL SUMMARY RESULTS

RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014

<i>Sample Location:</i>	CSA GW Ext. Sys. Discharge	MW102D1	MW102D2	MW102D4
<i>Sample ID:</i>	GW-12610-080514-SSH-1402	GW-12610-080614-SSH-1403	GW-12610-080614-SSH-1404	GW-12610-080614-SSH-1405
<i>Sample Date:</i>	8/5/2014	8/6/2014	8/6/2014	8/6/2014
Parameters:	Units			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	0.68 J	0.41 J	0.13 J	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U	0.19 U	0.19 U	0.19 U

TABLE 2

VALIDATED ANALYTICAL SUMMARY RESULTS

RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014

Sample Location:	CSA GW Ext. Sys. Discharge	MW102D4	MW300S	MW301D2
Sample ID:	GW-12610-080514-SSH-1402	GW-12610-080614-SSH-1406	GW-12610-080614-SSH-1407	GW-12610-080614-SSH-1410
Sample Date:	8/5/2014	8/6/2014 (Duplicate)	8/6/2014	8/6/2014
Parameters:				
	Units			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.68 J	0.10 J	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U

Notes:

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

TABLE 3

**ANALYTICAL METHODS AND HOLDING TIME CRITERIA
SEMI-ANNUAL GROUNDWATER SAMPLING
RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014**

<i>Parameter</i>	<i>Method ¹</i>	<i>Matrix</i>	<i>Preservation</i>	<i>Holding Time</i>	
				<i>Collection to Extraction (Days)</i>	<i>Collection or Extraction to Analysis (Days)</i>
TCL PCBs	SW-846 8082	Water	Iced, 0-6 °C	7	40

Notes

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

PCBs - Polychlorinated Biphenyls

TCL - Target Compound List

TABLE 4

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SEMI-ANNUAL GROUNDWATER SAMPLING
RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014

<i>Parameter</i>	<i>Sample ID</i>	<i>Surrogate</i>	<i>Surrogate Recovery (percent)</i>	<i>Control Limits (percent)</i>	<i>Analyte</i>	<i>Qualified Result</i>	<i>Units</i>
TCL PCBs	GW-12610-080514-SSH-1401	Decachlorobiphenyl	7	10-130	Aroclor 1254 Aroclor 1260	R R	µg/L µg/L

Notes:

- R - Rejected
- PCBs - Polychlorinated Biphenyls
- TCL - Target Compound List

TABLE 5

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO POOR CHROMATOGRAPHIC MATCH TO ANALYTICAL STANDARD
SEMI-ANNUAL GROUNDWATER SAMPLING
RACER BAY CITY SITE
BAY CITY, MICHIGAN
AUGUST 2014

<i>Parameter</i>	<i>Sample ID</i>	<i>Analyte</i>	<i>Qualified Result</i>	<i>Units</i>
TCL PCBs	GW-12610-080514-SSH-1402	Aroclor-1242	0.68 J	µg/L
	GW-12610-080614-SSH-1403	Aroclor-1242	0.41 J	µg/L

Notes:

J - Estimated concentration
PCB - Polychlorinated Biphenyls
TCL - Target Compound List

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-41583-1

Client Project/Site: 12610-T03-008, RACER Bay City

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

9/15/2014 1:34:27 PM

Denise Heckler, Project Manager II

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Job ID: 240-41583-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12610-T03-008, RACER Bay City

Report Number: 240-41583-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 09/06/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.8 C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples W-12610-090514-SSH-1411 (240-41583-1) and TB-12610-090514-SSH-1412 (240-41583-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA Method 624. The samples were analyzed on 09/10/2014.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 09/10/2014 and analyzed on 09/12/2014.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Job ID: 240-41583-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

TOTAL RECOVERABLE METALS (ICP)

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 09/10/2014 and analyzed on 09/11/2014.

Requested reporting limits (RL) that fall below the laboratory's verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.

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

MERCURY

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 09/10/2014 and analyzed on 09/11/2014.

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

N-HEXANE EXTRACTABLE MATERIAL

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for n-hexane extractable material in accordance with EPA Method 1664A. The samples were prepared and analyzed on 09/11/2014.

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

TOTAL SUSPENDED SOLIDS

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 09/10/2014.

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

AMMONIA

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for ammonia in accordance with EPA Method 350.2. The samples were prepared and analyzed on 09/12/2014.

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

CHEMICAL OXYGEN DEMAND

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were analyzed on 09/10/2014.

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

TOTAL PHOSPHORUS

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for total phosphorus in accordance with SM 4500 P E. The samples were prepared and analyzed on 09/10/2014.

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

BIOCHEMICAL OXYGEN DEMAND

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for Biochemical oxygen demand in accordance with SM 5210B. The samples were analyzed on 09/06/2014.

The method blank result associated with batch 145904 was higher than the method-required limit of 0.2 mg/L.

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

PH

Sample W-12610-090514-SSH-1411 (240-41583-1) was analyzed for pH in accordance with SM 4500 H+ B. The samples were analyzed

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Job ID: 240-41583-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

on 09/06/2014.

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

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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Qualifiers

GC/MS VOA

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

GC Semi VOA

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

Metals

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

General Chemistry

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

Glossary

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

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-41583-1	W-12610-090514-SSH-1411	Water	09/05/14 10:10	09/06/14 09:50
240-41583-2	TB-12610-090514-SSH-1412	Water	09/05/14 10:15	09/06/14 09:50

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Client Sample ID: W-12610-090514-SSH-1411

Lab Sample ID: 240-41583-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Copper	21		20	ug/L	1		200.7 Rev 4.4	Total
Iron	540		100	ug/L	1		200.7 Rev 4.4	Recoverable Total
pH	7.98	HF	0.100	SU	1		4500 H+ B-2000	Recoverable Total/NA

Client Sample ID: TB-12610-090514-SSH-1412

Lab Sample ID: 240-41583-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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 PIT
350.2	Nitrogen, Ammonia, Distillation	MCAWW	TAL CAN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
5210B-2001	BOD, 5-Day	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN

Protocol References:

1664A = EPA-821-98-002

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

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Client Sample ID: W-12610-090514-SSH-1411

Date Collected: 09/05/14 10:10

Date Received: 09/06/14 09:50

Lab Sample ID: 240-41583-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			09/10/14 03:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		80 - 120				09/10/14 03:42	1
1,2-Dichloroethane-d4 (Surr)	90		80 - 125				09/10/14 03:42	1
Toluene-d8 (Surr)	98		80 - 120				09/10/14 03:42	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Client Sample ID: TB-12610-090514-SSH-1412

Date Collected: 09/05/14 10:15

Date Received: 09/06/14 09:50

Lab Sample ID: 240-41583-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			09/10/14 04:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		80 - 120				09/10/14 04:05	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 125				09/10/14 04:05	1
Toluene-d8 (Surr)	99		80 - 120				09/10/14 04:05	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Client Sample ID: W-12610-090514-SSH-1411

Date Collected: 09/05/14 10:10

Date Received: 09/06/14 09:50

Lab Sample ID: 240-41583-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Aroclor-1221	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Aroclor-1232	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Aroclor-1242	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Aroclor-1248	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Aroclor-1254	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Aroclor-1260	0.095	U	0.095	ug/L		09/10/14 07:38	09/12/14 00:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	70		10 - 114			09/10/14 07:38	09/12/14 00:31	1
Tetrachloro-m-xylene	70		15 - 131			09/10/14 07:38	09/12/14 00:31	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Client Sample ID: W-12610-090514-SSH-1411

Date Collected: 09/05/14 10:10

Date Received: 09/06/14 09:50

Lab Sample ID: 240-41583-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	ug/L		09/10/14 09:03	09/11/14 15:19	1
Cadmium	2.0	U	2.0	ug/L		09/10/14 09:03	09/11/14 15:19	1
Chromium	5.0	U	5.0	ug/L		09/10/14 09:03	09/11/14 15:19	1
Copper	21		20	ug/L		09/10/14 09:03	09/11/14 15:19	1
Iron	540		100	ug/L		09/10/14 09:03	09/11/14 15:19	1
Nickel	20	U	20	ug/L		09/10/14 09:03	09/11/14 15:19	1
Lead	3.0	U	3.0	ug/L		09/10/14 09:03	09/11/14 15:19	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-090514-SSH-1411

Date Collected: 09/05/14 10:10

Date Received: 09/06/14 09:50

Lab Sample ID: 240-41583-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		09/10/14 14:35	09/11/14 16:44	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

General Chemistry

Client Sample ID: W-12610-090514-SSH-1411

Date Collected: 09/05/14 10:10

Date Received: 09/06/14 09:50

Lab Sample ID: 240-41583-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil and Grease)	4.9	U	4.9	mg/L		09/11/14 17:10	09/11/14 17:10	1
Ammonia (as N)	2.0	U	2.0	mg/L		09/12/14 08:30	09/12/14 12:13	1
Chemical Oxygen Demand	10	U	10	mg/L			09/10/14 11:36	1
pH	7.98	HF	0.100	SU			09/06/14 11:36	1
Biochemical Oxygen Demand	2.0	U	2.0	mg/L			09/06/14 12:36	1
Total Suspended Solids	4.0	U	4.0	mg/L			09/10/14 08:36	1
Total Phosphorus as P	0.10	U	0.10	mg/L		09/10/14 06:49	09/10/14 13:56	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

GC/MS VOA

Analysis Batch: 146239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	624	
240-41583-2	TB-12610-090514-SSH-1412	Total/NA	Water	624	
LCS 240-146239/6	Lab Control Sample	Total/NA	Water	624	
MB 240-146239/5	Method Blank	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 146302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	3510C	
LCS 240-146302/6-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-146302/5-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 146651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	608	146302
LCS 240-146302/6-A	Lab Control Sample	Total/NA	Water	608	146302
MB 240-146302/5-A	Method Blank	Total/NA	Water	608	146302

Metals

Prep Batch: 146337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total Recoverable	Water	200.7	
LCS 240-146337/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-146337/1-A	Method Blank	Total Recoverable	Water	200.7	

Prep Batch: 146348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	245.1	
LCS 240-146348/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-146348/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 146670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	245.1	146348
LCS 240-146348/2-A	Lab Control Sample	Total/NA	Water	245.1	146348
MB 240-146348/1-A	Method Blank	Total/NA	Water	245.1	146348

Analysis Batch: 146693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total Recoverable	Water	200.7 Rev 4.4	146337
LCS 240-146337/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	146337
MB 240-146337/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	146337

General Chemistry

Prep Batch: 117804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	1664A	

TestAmerica Canton

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

General Chemistry (Continued)

Prep Batch: 117804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-117804/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 180-117804/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 180-117804/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 117909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	1664A	117804
LCS 180-117804/2-A	Lab Control Sample	Total/NA	Water	1664A	117804
LCSD 180-117804/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	117804
MB 180-117804/1-A	Method Blank	Total/NA	Water	1664A	117804

Analysis Batch: 145895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	4500 H+ B-2000	
LCS 240-145895/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 145904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	5210B-2001	
LCS 240-145904/3	Lab Control Sample	Total/NA	Water	5210B-2001	
SCB 240-145904/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-145904/1	Method Blank	Total/NA	Water	5210B-2001	

Prep Batch: 146293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	365.2/365.3/365	
LCS 240-146293/11-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
MB 240-146293/10-A	Method Blank	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 146325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	SM 2540D	
240-41583-1 DU	W-12610-090514-SSH-1411	Total/NA	Water	SM 2540D	
LCS 240-146325/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 240-146325/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 146335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	410.4	
LCS 240-146335/10	Lab Control Sample	Total/NA	Water	410.4	
MB 240-146335/9	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 146419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	SM4500 P E-1999	146293
LCS 240-146293/11-A	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	146293
MB 240-146293/10-A	Method Blank	Total/NA	Water	SM4500 P E-1999	146293

TestAmerica Canton

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

General Chemistry (Continued)

Prep Batch: 146733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	Distill/Ammonia	
LCS 240-146733/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 240-146733/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 146743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-41583-1	W-12610-090514-SSH-1411	Total/NA	Water	350.2	146733
LCS 240-146733/2-A	Lab Control Sample	Total/NA	Water	350.2	146733
MB 240-146733/1-A	Method Blank	Total/NA	Water	350.2	146733

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Lab Sample ID: MB 240-146239/5

Matrix: Water

Analysis Batch: 146239

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			09/09/14 17:45	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		80 - 120				09/09/14 17:45	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 125				09/09/14 17:45	1
Toluene-d8 (Surr)	101		80 - 120				09/09/14 17:45	1

Lab Sample ID: LCS 240-146239/6

Matrix: Water

Analysis Batch: 146239

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	21.3		ug/L		106	10 - 251
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	88		80 - 120				
1,2-Dichloroethane-d4 (Surr)	95		80 - 125				
Toluene-d8 (Surr)	103		80 - 120				

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

Lab Sample ID: MB 240-146302/5-A

Matrix: Water

Analysis Batch: 146651

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 146302

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Aroclor-1221	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Aroclor-1232	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Aroclor-1242	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Aroclor-1248	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Aroclor-1254	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Aroclor-1260	0.10	U	0.10	ug/L		09/10/14 07:38	09/12/14 01:28	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	68		10 - 114			09/10/14 07:38	09/12/14 01:28	1
Tetrachloro-m-xylene	79		15 - 131			09/10/14 07:38	09/12/14 01:28	1

Lab Sample ID: LCS 240-146302/6-A

Matrix: Water

Analysis Batch: 146651

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 146302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.23		ug/L		89	50 - 114
Aroclor-1260	2.50	2.27		ug/L		91	8 - 127

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Lab Sample ID: LCS 240-146302/6-A

Matrix: Water

Analysis Batch: 146651

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 146302

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	69		10 - 114
Tetrachloro-m-xylene	79		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-146337/1-A

Matrix: Water

Analysis Batch: 146693

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 146337

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Silver	5.0	U	5.0	ug/L		09/10/14 08:55	09/11/14 14:52	1	
Cadmium	2.0	U	2.0	ug/L		09/10/14 08:55	09/11/14 14:52	1	
Chromium	5.0	U	5.0	ug/L		09/10/14 08:55	09/11/14 14:52	1	
Copper	20	U	20	ug/L		09/10/14 08:55	09/11/14 14:52	1	
Iron	100	U	100	ug/L		09/10/14 08:55	09/11/14 14:52	1	
Nickel	20	U	20	ug/L		09/10/14 08:55	09/11/14 14:52	1	
Lead	3.0	U	3.0	ug/L		09/10/14 08:55	09/11/14 14:52	1	

Lab Sample ID: LCS 240-146337/2-A

Matrix: Water

Analysis Batch: 146693

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 146337

		Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Silver	50.0	52.8		ug/L		106	85 - 115		
Cadmium	50.0	52.4		ug/L		105	85 - 115		
Chromium	200	196		ug/L		98	85 - 115		
Copper	250	251		ug/L		101	85 - 115		
Iron	1000	1000		ug/L		100	85 - 115		
Nickel	500	497		ug/L		99	85 - 115		
Lead	500	482		ug/L		96	85 - 115		

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-146348/1-A

Matrix: Water

Analysis Batch: 146670

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 146348

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Mercury	0.20	U	0.20	ug/L		09/10/14 14:35	09/11/14 16:30	1	

Lab Sample ID: LCS 240-146348/2-A

Matrix: Water

Analysis Batch: 146670

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 146348

		Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Mercury	5.00	4.73		ug/L		95	85 - 115		

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 180-117804/1-A

Matrix: Water

Analysis Batch: 117909

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 117804

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil and Grease)	5.0	U	5.0	mg/L	-	09/11/14 17:10	09/11/14 17:10	1

Lab Sample ID: LCS 180-117804/2-A

Matrix: Water

Analysis Batch: 117909

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 117804

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil and Grease)	40.0	35.0		mg/L	-	87	78 - 114

Lab Sample ID: LCSD 180-117804/3-A

Matrix: Water

Analysis Batch: 117909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 117804

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM (Oil and Grease)	40.0	35.9		mg/L	-	90	78 - 114	3	18

Method: 350.2 - Nitrogen, Ammonia, Distillation

Lab Sample ID: MB 240-146733/1-A

Matrix: Water

Analysis Batch: 146743

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 146733

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	2.0	U	2.0	mg/L	-	09/12/14 08:30	09/12/14 12:10	1

Lab Sample ID: LCS 240-146733/2-A

Matrix: Water

Analysis Batch: 146743

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 146733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	15.3	15.0		mg/L	-	98	85 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-146335/9

Matrix: Water

Analysis Batch: 146335

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	mg/L	-		09/10/14 11:25	1

Lab Sample ID: LCS 240-146335/10

Matrix: Water

Analysis Batch: 146335

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	68.0	64.5		mg/L	-	95	90 - 110

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-145895/2

Matrix: Water

Analysis Batch: 145895

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.09	7.200		SU		102	97 - 103

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

Lab Sample ID: SCB 240-145904/2

Matrix: Water

Analysis Batch: 145904

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	mg/L			09/06/14 12:25	1

Lab Sample ID: USB 240-145904/1

Matrix: Water

Analysis Batch: 145904

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	mg/L			09/06/14 12:23	1

Lab Sample ID: LCS 240-145904/3

Matrix: Water

Analysis Batch: 145904

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	181		mg/L		92	85 - 115

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

Lab Sample ID: MB 240-146325/1

Matrix: Water

Analysis Batch: 146325

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			09/10/14 08:36	1

Lab Sample ID: LCS 240-146325/2

Matrix: Water

Analysis Batch: 146325

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	99.3	93.0		mg/L		94	73 - 113

Lab Sample ID: 240-41583-1 DU

Matrix: Water

Analysis Batch: 146325

Client Sample ID: W-12610-090514-SSH-1411

Prep Type: Total/NA

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

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-146293/10-A

Matrix: Water

Analysis Batch: 146419

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 146293

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	mg/L		09/10/14 06:29	09/10/14 14:04	1

Lab Sample ID: LCS 240-146293/11-A

Matrix: Water

Analysis Batch: 146419

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 146293

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	3.13	3.15		mg/L		101	53 - 134

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	12DCE (80-125)	TOL (80-120)
240-41583-1	W-12610-090514-SSH-1411	84	90	98
240-41583-2	TB-12610-090514-SSH-1412	82	93	99
LCS 240-146239/6	Lab Control Sample	88	95	103
MB 240-146239/5	Method Blank	87	93	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-114)	TCX2 (15-131)
240-41583-1	W-12610-090514-SSH-1411	70	70
LCS 240-146302/6-A	Lab Control Sample	69	79
MB 240-146302/5-A	Method Blank	68	79

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Client Sample ID: W-12610-090514-SSH-1411

Lab Sample ID: 240-41583-1

Date Collected: 09/05/14 10:10

Matrix: Water

Date Received: 09/06/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	146239	09/10/14 03:42	TJL1	TAL CAN
Total/NA	Prep	3510C			146302	09/10/14 07:38	JDR	TAL CAN
Total/NA	Analysis	608		1	146651	09/12/14 00:31	KMG	TAL CAN
Total Recoverable	Prep	200.7			146337	09/10/14 09:03	WAL	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	146693	09/11/14 15:19	ADS	TAL CAN
Total/NA	Prep	245.1			146348	09/10/14 14:35	WAL	TAL CAN
Total/NA	Analysis	245.1		1	146670	09/11/14 16:44	AMM2	TAL CAN
Total/NA	Analysis	1664A		1	117909	09/11/14 17:10	NAK	TAL PIT
Total/NA	Prep	1664A			117804	09/11/14 17:10	NAK	TAL PIT
Total/NA	Prep	Distill/Ammonia			146733	09/12/14 08:30	JAK	TAL CAN
Total/NA	Analysis	350.2		1	146743	09/12/14 12:13	JAK	TAL CAN
Total/NA	Analysis	410.4		1	146335	09/10/14 11:36	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	145895	09/06/14 11:36	SEM	TAL CAN
Total/NA	Analysis	5210B-2001		1	145904	09/06/14 12:36	SEM	TAL CAN
Total/NA	Analysis	SM 2540D		1	146325	09/10/14 08:36	AS1	TAL CAN
Total/NA	Prep	365.2/365.3/365			146293	09/10/14 06:49	TPH	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	146419	09/10/14 13:56	TPH	TAL CAN

Client Sample ID: TB-12610-090514-SSH-1412

Lab Sample ID: 240-41583-2

Date Collected: 09/05/14 10:15

Matrix: Water

Date Received: 09/06/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	146239	09/10/14 04:05	TJL1	TAL CAN

Laboratory References:

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

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T03-008, RACER Bay City

TestAmerica Job ID: 240-41583-1

Laboratory: TestAmerica Canton

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

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

Laboratory: TestAmerica Pittsburgh

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-15
California	State Program	9	2891	03-31-15
Connecticut	State Program	1	PH-0688	09-30-14 *
Florida	NELAP	4	E871008	06-30-15
Illinois	NELAP	5	002602	06-30-15
Kansas	NELAP	7	E-10350	01-31-15
Louisiana	NELAP	6	04041	06-30-15
New Hampshire	NELAP	1	203011	04-04-15
New Jersey	NELAP	2	PA005	06-30-15
New York	NELAP	2	11182	03-31-15
North Carolina (WW/SW)	State Program	4	434	12-31-14
Pennsylvania	NELAP	3	02-00416	04-30-15
South Carolina	State Program	4	89014	04-30-15
Texas	NELAP	6	T104704528	03-31-15
US Fish & Wildlife	Federal		LE94312A-1	11-30-14
USDA	Federal		P330-10-00139	05-23-16
Utah	NELAP	8	STLP	05-31-15
Virginia	NELAP	3	460189	09-14-14 *
West Virginia DEP	State Program	3	142	01-31-15

* Certification renewal pending - certification considered valid.

TestAmerica Canton

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-41583 Chain of Custody



CONESTOGA-ROVERS
& ASSOCIATES

CHAIN OF CUSTODY RECORD

14496 Sheldon Road, Suite #200, Plymouth, Michigan 48170

Phone: (734) 453-5123

Fax: (734) 453-5201

COC NO.: PL-12614

4.0

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/Phase/Task Code: 12610-TOY-001414		Laboratory Name: TestAmerica		Lab Location: North Canton OH		SSOW ID: 12610-TO03-008	
Project Name: Racer Bay City		Lab Contact: D. Heckler		Lab Quote No:		Cooler No:	
Project Location: Bay City MI		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)			
Chemistry Contact: R. Fleisher		SAMPLE TYPE		Total Containers/Sample			
Sampler(s): S. Hoenemeyer		(Grab (G) or Comp (C))		Other:			
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yyyy)		TIME (hh:mm)		MS/MSD Request	
1 W-12610-090514-SSH-1411		9/5/14		10:10		Wt% Pb, Ni, Ag, Fe	
2 TB-12610-090514-SSH-1412		9/5/14		10:15		TSS, Phosphorus, Wt% Chloride, HEM, PCBs	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
TAT Required in business days (use separate COCs for different TATs): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☒ 1 Week ☐ 2 Week ☐ Other:						Total Number of Containers: 15	
RELINQUISHED BY: [Signature]						Notes/Special Requirements: #metals Cd, Cr, Cu, Hg, Pb, Ni, Ag, Fe	
DATE: 9/5/14		TIME: 1500		RECEIVED BY: [Signature]		DATE: 9/16/14	
COMPANY: CRA		TIME: 1500		COMPANY: TA-Canton		TIME: 9:50	

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login #: 41583

Client Conestoga Rivers Site Name _____ Cooler unpacked by: Dakota Jarm
Cooler Received on 9/6/14 Opened on 9/6/14
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____
TestAmerica Cooler # _____ Foam Box Client Cooler Box _____ Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 4 (CF -2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 5 (CF 0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 8 (CF 0 °C) Observed Cooler Temp. 4.8 °C Corrected Cooler Temp. 4.8 °C

☐ See Multiple
Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No

-Were custody seals on the outside of the cooler(s) signed & dated? Yes No

-Were custody seals on the bottle(s)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Did all bottles arrive in good condition (Unbroken)? Yes No

7. Could all bottle labels be reconciled with the COC? Yes No

8. Were correct bottle(s) used for the test(s) indicated? Yes No

9. Sufficient quantity received to perform indicated analyses? Yes No

10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469

11. Were VOAs on the COC? Yes No

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

13. Was a trip blank present in the cooler(s)? Yes No

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

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: DT

15. SAMPLE CONDITION

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

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

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

16. SAMPLE PRESERVATION

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

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

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Preservative</u> <u>Added (mls)</u>	<u>Lot #</u>
W-12610-090514-SSH-1411	240-41583-D-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-090514-SSH-1411	240-41583-E-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-090514-SSH-1411	240-41583-F-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-090514-SSH-1411	240-41583-M-1	Amber Glass 1 liter - Sulfuric Acid	<2	_____	_____
W-12610-090514-SSH-1411	240-41583-N-1	Amber Glass 1 liter - Sulfuric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-41583-1

Login Number: 41583

List Number: 2

Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

List Creation: 09/10/14 01:46 PM

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

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: 240-45945-1

Client Project/Site: 12610-T04-010, RACER Bay City

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

1/7/2015 3:50:03 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

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results through

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www.testamericainc.com

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Job ID: 240-45945-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12610-T04-010, RACER Bay City

Report Number: 240-45945-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/30/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.1 C.

Samples were bumped to one week Rush at the request of CRA. A revised chain of custody was not provided.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples W-12610-122914-SSH-1420 (240-45945-1), W-12610-122914-SSH-1421 (240-45945-2) and W-12610-122914-SSH-1422 (240-45945-3) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 01/06/2015 and 12/31/2014 and analyzed on 01/05/2015 and 01/07/2015.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 163348.

The following sample(s) appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration:

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Job ID: 240-45945-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

W-12610-122914-SSH-1420 (240-45945-1). The sample(s) has been quantified and reported. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result. The best overall pattern match was used for identification and quantitation.

Surrogate recovery for the following sample(s) was outside control limits: W-12610-122914-SSH-1422 (240-45945-3). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results for Tetrachloro-m-xylene. Decachlorobiphenyl failed below 10% on the original and re-extract data. Both sets of data are reported.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: W-12610-122914-SSH-1422 (240-45945-3). These results have been reported and qualified.

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

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

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

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-45945-1	W-12610-122914-SSH-1420	Water	12/29/14 09:30	12/30/14 09:20
240-45945-2	W-12610-122914-SSH-1421	Water	12/29/14 09:40	12/30/14 09:20
240-45945-3	W-12610-122914-SSH-1422	Water	12/29/14 10:15	12/30/14 09:20

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Client Sample ID: W-12610-122914-SSH-1420

Lab Sample ID: 240-45945-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.22		0.20	0.060	ug/L	1		8082	Total/NA

Client Sample ID: W-12610-122914-SSH-1421

Lab Sample ID: 240-45945-2

No Detections.

Client Sample ID: W-12610-122914-SSH-1422

Lab Sample ID: 240-45945-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Client Sample ID: W-12610-122914-SSH-1420

Lab Sample ID: 240-45945-1

Date Collected: 12/29/14 09:30

Matrix: Water

Date Received: 12/30/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.044	ug/L		12/31/14 06:51	01/05/15 10:28	1
Aroclor-1221	0.20	U	0.20	0.045	ug/L		12/31/14 06:51	01/05/15 10:28	1
Aroclor-1232	0.20	U	0.20	0.073	ug/L		12/31/14 06:51	01/05/15 10:28	1
Aroclor-1242	0.22		0.20	0.060	ug/L		12/31/14 06:51	01/05/15 10:28	1
Aroclor-1248	0.20	U	0.20	0.061	ug/L		12/31/14 06:51	01/05/15 10:28	1
Aroclor-1254	0.20	U	0.20	0.032	ug/L		12/31/14 06:51	01/05/15 10:28	1
Aroclor-1260	0.20	U	0.20	0.038	ug/L		12/31/14 06:51	01/05/15 10:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		23 - 136				12/31/14 06:51	01/05/15 10:28	1
DCB Decachlorobiphenyl	51		10 - 130				12/31/14 06:51	01/05/15 10:28	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Client Sample ID: W-12610-122914-SSH-1421

Date Collected: 12/29/14 09:40

Date Received: 12/30/14 09:20

Lab Sample ID: 240-45945-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		12/31/14 06:51	01/05/15 10:42	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		12/31/14 06:51	01/05/15 10:42	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		12/31/14 06:51	01/05/15 10:42	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		12/31/14 06:51	01/05/15 10:42	1
Aroclor-1248	0.19	U	0.19	0.059	ug/L		12/31/14 06:51	01/05/15 10:42	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		12/31/14 06:51	01/05/15 10:42	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		12/31/14 06:51	01/05/15 10:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		23 - 136				12/31/14 06:51	01/05/15 10:42	1
DCB Decachlorobiphenyl	67		10 - 130				12/31/14 06:51	01/05/15 10:42	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Client Sample ID: W-12610-122914-SSH-1422

Lab Sample ID: 240-45945-3

Date Collected: 12/29/14 10:15

Matrix: Water

Date Received: 12/30/14 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.042	ug/L		12/31/14 06:51	01/05/15 10:56	1
Aroclor-1221	0.19	U	0.19	0.043	ug/L		12/31/14 06:51	01/05/15 10:56	1
Aroclor-1232	0.19	U	0.19	0.070	ug/L		12/31/14 06:51	01/05/15 10:56	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		12/31/14 06:51	01/05/15 10:56	1
Aroclor-1248	0.19	U	0.19	0.059	ug/L		12/31/14 06:51	01/05/15 10:56	1
Aroclor-1254	0.19	U	0.19	0.031	ug/L		12/31/14 06:51	01/05/15 10:56	1
Aroclor-1260	0.19	U	0.19	0.037	ug/L		12/31/14 06:51	01/05/15 10:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	22	X	23 - 136	12/31/14 06:51	01/05/15 10:56	1
DCB Decachlorobiphenyl	3	X	10 - 130	12/31/14 06:51	01/05/15 10:56	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Client Sample ID: W-12610-122914-SSH-1422

Date Collected: 12/29/14 10:15

Date Received: 12/30/14 09:20

Lab Sample ID: 240-45945-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U H	0.19	0.042	ug/L		01/06/15 13:32	01/07/15 12:53	1
Aroclor-1221	0.19	U H	0.19	0.043	ug/L		01/06/15 13:32	01/07/15 12:53	1
Aroclor-1232	0.19	U H	0.19	0.070	ug/L		01/06/15 13:32	01/07/15 12:53	1
Aroclor-1242	0.19	U H	0.19	0.058	ug/L		01/06/15 13:32	01/07/15 12:53	1
Aroclor-1248	0.19	U H	0.19	0.059	ug/L		01/06/15 13:32	01/07/15 12:53	1
Aroclor-1254	0.19	U H	0.19	0.031	ug/L		01/06/15 13:32	01/07/15 12:53	1
Aroclor-1260	0.19	U H	0.19	0.037	ug/L		01/06/15 13:32	01/07/15 12:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	43		23 - 136				01/06/15 13:32	01/07/15 12:53	1
DCB Decachlorobiphenyl	8	X	10 - 130				01/06/15 13:32	01/07/15 12:53	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

GC Semi VOA

Prep Batch: 162929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-45945-1	W-12610-122914-SSH-1420	Total/NA	Water	3520C	
240-45945-2	W-12610-122914-SSH-1421	Total/NA	Water	3520C	
240-45945-3	W-12610-122914-SSH-1422	Total/NA	Water	3520C	
LCS 240-162929/7-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-162929/6-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 163177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-45945-1	W-12610-122914-SSH-1420	Total/NA	Water	8082	162929
240-45945-2	W-12610-122914-SSH-1421	Total/NA	Water	8082	162929
240-45945-3	W-12610-122914-SSH-1422	Total/NA	Water	8082	162929
LCS 240-162929/7-A	Lab Control Sample	Total/NA	Water	8082	162929
MB 240-162929/6-A	Method Blank	Total/NA	Water	8082	162929

Prep Batch: 163348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-45945-3 - RE	W-12610-122914-SSH-1422	Total/NA	Water	3520C	
LCS 240-163348/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-163348/2-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 163450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-45945-3 - RE	W-12610-122914-SSH-1422	Total/NA	Water	8082	163348
LCS 240-163348/3-A	Lab Control Sample	Total/NA	Water	8082	163348
MB 240-163348/2-A	Method Blank	Total/NA	Water	8082	163348

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Lab Sample ID: MB 240-162929/6-A

Matrix: Water

Analysis Batch: 163177

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.044	ug/L		12/31/14 06:51	01/05/15 11:23	1
Aroclor-1221	0.20	U	0.20	0.045	ug/L		12/31/14 06:51	01/05/15 11:23	1
Aroclor-1232	0.20	U	0.20	0.073	ug/L		12/31/14 06:51	01/05/15 11:23	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		12/31/14 06:51	01/05/15 11:23	1
Aroclor-1248	0.20	U	0.20	0.061	ug/L		12/31/14 06:51	01/05/15 11:23	1
Aroclor-1254	0.20	U	0.20	0.032	ug/L		12/31/14 06:51	01/05/15 11:23	1
Aroclor-1260	0.20	U	0.20	0.038	ug/L		12/31/14 06:51	01/05/15 11:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		23 - 136	12/31/14 06:51	01/05/15 11:23	1
DCB Decachlorobiphenyl	61		10 - 130	12/31/14 06:51	01/05/15 11:23	1

Lab Sample ID: LCS 240-162929/7-A

Matrix: Water

Analysis Batch: 163177

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.77		ug/L		71	66 - 120
Aroclor-1260	2.50	1.83		ug/L		73	55 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	72		23 - 136
DCB Decachlorobiphenyl	65		10 - 130

Lab Sample ID: MB 240-163348/2-A

Matrix: Water

Analysis Batch: 163450

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163348

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.044	ug/L		01/06/15 13:32	01/07/15 13:06	1
Aroclor-1221	0.20	U	0.20	0.045	ug/L		01/06/15 13:32	01/07/15 13:06	1
Aroclor-1232	0.20	U	0.20	0.073	ug/L		01/06/15 13:32	01/07/15 13:06	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		01/06/15 13:32	01/07/15 13:06	1
Aroclor-1248	0.20	U	0.20	0.061	ug/L		01/06/15 13:32	01/07/15 13:06	1
Aroclor-1254	0.20	U	0.20	0.032	ug/L		01/06/15 13:32	01/07/15 13:06	1
Aroclor-1260	0.20	U	0.20	0.038	ug/L		01/06/15 13:32	01/07/15 13:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		23 - 136	01/06/15 13:32	01/07/15 13:06	1
DCB Decachlorobiphenyl	57		10 - 130	01/06/15 13:32	01/07/15 13:06	1

Lab Sample ID: LCS 240-163348/3-A

Matrix: Water

Analysis Batch: 163450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.70		ug/L		68	66 - 120

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Lab Sample ID: LCS 240-163348/3-A

Matrix: Water

Analysis Batch: 163450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1260	2.50	1.79		ug/L		72	55 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	68		23 - 136
DCB Decachlorobiphenyl	54		10 - 130

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX2 (23-136)	DCB2 (10-130)
240-45945-1	W-12610-122914-SSH-1420	71	51
240-45945-2	W-12610-122914-SSH-1421	84	67
240-45945-3	W-12610-122914-SSH-1422	22 X	3 X
240-45945-3 - RE	W-12610-122914-SSH-1422	43	8 X
LCS 240-162929/7-A	Lab Control Sample	72	65
LCS 240-163348/3-A	Lab Control Sample	68	54
MB 240-162929/6-A	Method Blank	72	61
MB 240-163348/2-A	Method Blank	68	57

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Client Sample ID: W-12610-122914-SSH-1420

Lab Sample ID: 240-45945-1

Date Collected: 12/29/14 09:30

Matrix: Water

Date Received: 12/30/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			162929	12/31/14 06:51	EMB	TAL CAN
Total/NA	Analysis	8082		1	163177	01/05/15 10:28	HMB	TAL CAN

Client Sample ID: W-12610-122914-SSH-1421

Lab Sample ID: 240-45945-2

Date Collected: 12/29/14 09:40

Matrix: Water

Date Received: 12/30/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			162929	12/31/14 06:51	EMB	TAL CAN
Total/NA	Analysis	8082		1	163177	01/05/15 10:42	HMB	TAL CAN

Client Sample ID: W-12610-122914-SSH-1422

Lab Sample ID: 240-45945-3

Date Collected: 12/29/14 10:15

Matrix: Water

Date Received: 12/30/14 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			162929	12/31/14 06:51	EMB	TAL CAN
Total/NA	Analysis	8082		1	163177	01/05/15 10:56	HMB	TAL CAN
Total/NA	Prep	3520C	RE		163348	01/06/15 13:32	SDE	TAL CAN
Total/NA	Analysis	8082	RE	1	163450	01/07/15 12:53	HMB	TAL CAN

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12610-T04-010, RACER Bay City

TestAmerica Job ID: 240-45945-1

Laboratory: TestAmerica Canton

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

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

* Certification renewal pending - certification considered valid.

TestAmerica Canton

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-45945 Chain of Custody



CONESTOGA-ROVERS
& ASSOCIATES

CHAIN OF CUSTODY RECORD

14496 Sheldon Road, Suite #200, Plymouth, Michigan 48170

Phone: (734) 453-5123

Fax: (734) 453-5201

1.4

COC NO.: PL-12658

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No./Phase/Task Code: 12610-TOY-001114		Laboratory Name: Test America		Lab Location: North Canton OH		SSOW ID: 2610-TOY-010	
Project Name: Raw Bag City		Lab Contact: D. Hickey		Lab Quote No:		Cooler No:	
Project Location: Bay City, MI		Container Quantity & Preservation:		Analysis Requested: (See Back of COC for Definitions)		Carrier: Fed Ex	
Chemistry Contact: R. Fleisher		Sample Type: (see back of COC)		Unpreserved		Airbill No: 80618484 0766	
Sampler(s): S. Hoenemeyer		Grab (g) or Comp (C)		Hydrochloric Acid (HCl)		Date Shipped: 12/29/17	
Matrix Code		Nitric Acid (HNO ₃)		Sulfuric Acid (H ₂ SO ₄)		COMMENTS/ SPECIAL INSTRUCTIONS:	
Methanol/Water (Soil)		Sodium Hydroxide (NaOH)		EnCores 3x5-g, 1x25-g		MS/MSD Request	
Other:		Total Containers/Sample		PCBs			
Item		1		2		3	
1		12610-122914-SSA-1420		12/29/14 093006C		X	
2		12610-122914-SSA-1421		12/29/14 0940056C		X	
3		12610-122914-SSA-1422		12/29/14 101506C		X	
4							
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TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

RELINQUISHED BY: John. Moran DATE: 12/29/14 COMPANY: CRA

RECEIVED BY: Heather Powell DATE: 12/30/14 TIME: 9:20

Notes/ Special Requirements:

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:

WHITE - Fully Executed Copy (CRA)

YELLOW - Receiving Laboratory Copy

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: COC-10A (20110804)



TestAmerica Canton Sample Receipt Form/Narrative				Login # : <u>45945</u>	
Canton Facility					
Client <u>CRA</u>		Site Name <u>Bay City</u>		Cooler unpacked by: <u>Matha Powell</u>	
Cooler Received on <u>12/30/14</u>		Opened on <u>12/30/14</u>			
FedEx: ☒ <u>Exp</u>		UPS ☐ FAS ☐ Stetson ☐		Client Drop Off ☐ TestAmerica Courier ☐ Other ☐	
Receipt After-hours: Drop-off Date/Time _____				Storage Location _____	
TestAmerica Cooler # _____		Foam Box ☐ <u>Client Cooler</u> ☐		Box ☐ Other ☐	
Packing material used: <u>Bubble Wrap</u>		Foam ☐ Plastic Bag ☐		None ☐ Other ☐	
COOLANT: <u>Wet Ice</u>		Blue Ice ☐ Dry Ice ☐ Water ☐		None ☐	
1. Cooler temperature upon receipt IR GUN# A (CF +4.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C IR GUN# 4 (CF +1.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C IR GUN# 8 (CF +0.7 °C) Observed Cooler Temp. <u>1.9</u> °C Corrected Cooler Temp. <u>2.1</u> °C					
☐ See Multiple Cooler Form					
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> ☒ Yes ☐ No -Were custody seals on the outside of the cooler(s) signed & dated? ☒ Yes ☐ No NA -Were custody seals on the bottle(s)? ☒ Yes ☐ No					
3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☐ No					
4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No					
5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No					
6. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No					
7. Could all bottle labels be reconciled with the COC? ☒ Yes ☐ No					
8. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No					
9. Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No					
10. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☒ NA pH Strip Lot# <u>HC425511</u>					
11. Were VOAs on the COC? Yes ☐ No ☒ NA					
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA					
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ NA					
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____					
Concerning _____					

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES 	Samples processed by: <u>[Signature]</u>
15. SAMPLE CONDITION Sample(s) _____ were received after the recommended holding time had expired. Sample(s) _____ were received in a broken container. Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)	
16. SAMPLE PRESERVATION Sample(s) _____ were further preserved in the laboratory. Time preserved: _____ Preservative(s) added/Lot number(s): _____	