



**CONESTOGA-ROVERS
& ASSOCIATES**

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

September 11, 2012

Reference No. 012607

Ms. Tessy Jose
City of Detroit
Water and Sewerage Department
Industrial Waste Control Division
303 S. Livernois Avenue
Detroit, Michigan 48209

Dear Ms. Jose:

Re: DWSD Semi-Annual Report
(March 2012 through August 2012)
12950 Eckles Road
Livonia, Michigan 48150
Permit No.: SD6-94508

Conestoga-Rovers & Associates, Inc. (CRA) is providing the attached documents for the reporting requirements of Special Discharge Permit SD6-94508 for the period of March 2012 through August 2012.

Special Discharge Permit SD6-94508 was issued in June 2011 and is effective July 1, 2011 through June 30, 2015.

SECTION D: REPORTING REQUIREMENTS

- Reporting Period: March 1, 2012 to August 31, 2012
- Dates of Sampling: March 14, 2012; April 25, 2012; May 9, 2012; July 31, 2012; and August 15, 2012
- All samples were collected from the effluent sampling port of Tank T12, after the final pH adjustment
- Total Monthly Discharges:
 - March 2012: 590,138
 - April 2012: 553,270
 - May 2012: 1,045,497
 - June 2012: 310,367
 - July 2012: 88,331
 - August 2012: 644,951
- Total Flow to Date: 142,358,790 gallons

Equal
Employment
Opportunity Employer

REGISTERED COMPANY FOR
ISO 9001
ENGINEERING DESIGN



**CONESTOGA-ROVERS
& ASSOCIATES**

September 11, 2012

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Reference No. 012607

- As previously reported to DWSD, the Groundwater Treatment Plant or an electrical supply transformer was believed to have been struck by lightning at the end of June 2012. The system was not operated from June 18 to July 30, 2012 until final repairs were completed. Due to the shutdown, an effluent sample was not collected during June 2012.
- Signature of CRA's authorized representative who is knowledgeable of the remediation site's discharge

CRA certifies that the discharge complied with the permit discharge limits.

Please contact me at (734) 453-5123 if you require further information or clarification.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Christopher J. Meincke, P.E.

KTA/4/Det.

Encl.

cc: Dave Favero, RACER Trust

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - March 2012**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantities of Groundwater Discharged / Day - GAL	Notes
03/01/12	None	None			
03/02/12	None	None			
03/03/12	None	None			
03/04/12	None	None			
03/05/12	None	None			
03/06/12	None	None	On-Site	8,439	
03/07/12	None	None	On-Site	49,244	
03/08/12	None	None	On-Site	41,966	
03/09/12	None	None	On-Site	35,624	
03/10/12	None	None			
03/11/12	None	None			
03/12/12	None	None	On-Site	6,116	
03/13/12	None	None	On-Site	7,052	
03/14/12	None	None	On-site & Sampled	22,845	
03/15/12	None	None	On-Site	49,149	
03/16/12	None	None	On-Site	31,117	
03/17/12	None	None			
03/18/12	None	None			
03/19/12	None	None	On-Site	13,211	
03/20/12	None	None	On-Site	35,808	
03/21/12	None	None	On-Site	33,214	
03/22/12	None	None	On-Site	49,687	
03/23/12	None	None	On-Site	42,275	
03/24/12	None	None			
03/25/12	None	None			
03/26/12	None	None	On-Site	4,922	
03/27/12	None	None	On-Site	34,324	
03/28/12	None	None	On-Site	44,489	
03/29/12	None	None	On-Site	39,775	
03/30/12	None	None	On-Site	40,881	
03/31/12	None	None			

Total Monthly Discharge (gal)

590,138

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - April 2012**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantities of Groundwater Discharged / Day - GAL	Notes
04/01/12	None	None			
04/02/12	None	None	On-Site	7,064	
04/03/12	None	None	On-Site	46,872	
04/04/12	None	None	On-Site	30,469	
04/05/12	None	None	On-Site	39,281	
04/06/12	None	None	On-Site		
04/07/12	None	None			
04/08/12	None	None			
04/09/12	None	None	On-Site	12,764	
04/10/12	None	None	On-Site	34,007	
04/11/12	None	None	On-Site	14,579	
04/12/12	None	None	On-Site	32,649	
04/13/12	None	None	On-Site	34,391	
04/14/12	None	None			
04/15/12	None	None			
04/16/12	None	None	On-Site		
04/17/12	None	None	On-Site	20,592	
04/18/12	None	None	On-Site	27,533	
04/19/12	None	None	On-Site	46,012	
04/20/12	None	None	On-Site	28,327	
04/21/12	None	None			
04/22/12	None	None			
04/23/12	None	None	On-Site	10,961	
04/24/12	None	None	On-Site	39,140	
04/25/12	None	None	On-site & Sampled	39,524	
04/26/12	None	None	On-Site	44,968	
04/27/12	None	None	On-Site	26,123	
04/28/12	None	None			
04/29/12	None	None			
04/30/12	None	None	On-Site	18,013	

Total Monthly Discharge (gal)

553,270

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - May 2012**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantities of Groundwater Discharged / Day - GAL	Notes
05/01/12	None	None	On-Site	45,436	
05/02/12	None	None	On-Site	63,767	
05/03/12	None	None	On-Site	58,441	
05/04/12	None	None	On-Site	50,635	
05/05/12	None	None			
05/06/12	None	None			
05/07/12	None	None	On-Site	11,889	
05/08/12	None	None	On-Site	58,993	
05/09/12	None	None	On-site & Sampled	67,779	
05/10/12	None	None	On-Site	54,021	
05/11/12	None	None	On-Site	56,159	
05/12/12	None	None			
05/13/12	None	None			
05/14/12	None	None	On-Site	22,894	
05/15/12	None	None	On-Site	51,786	
05/16/12	None	None	On-Site	57,866	
05/17/12	None	None	On-Site	65,177	
05/18/12	None	None	On-Site	49,181	
05/19/12	None	None			
05/20/12	None	None			
05/21/12	None	None	On-Site	21,452	
05/22/12	None	None	On-Site	58,203	
05/23/12	None	None	On-Site	56,445	
05/24/12	None	None	On-Site	36,188	
05/25/12	None	None	On-Site	43,064	
05/26/12	None	None			
05/27/12	None	None			
05/28/12	None	None	On-Site	16,659	
05/29/12	None	None	On-Site	27,317	
05/30/12	None	None	On-Site	38,121	
05/31/12	None	None	On-Site	34,024	

Total Monthly Discharge (gal)

1,045,497

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - June 2012**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantities of Groundwater Discharged / Day - GAL	Notes
06/01/12	None	None	On-Site	37,879	
06/02/12	None	None			
06/03/12	None	None			
06/04/12	None	None	On-Site	872	
06/05/12	None	None	On-Site	54,423	
06/06/12	None	None	On-Site	2,194	
06/07/12	None	None	On-Site	35,980	
06/08/12	None	None	On-Site	29,415	
06/09/12	None	None			
06/10/12	None	None			
06/11/12	None	None	On-Site	9,644	
06/12/12	None	None	On-Site	38,841	
06/13/12	None	None	On-Site	37,649	
06/14/12	None	None	On-Site	35,740	
06/15/12	None	None	On-Site	27,730	
06/16/12	None	None			
06/17/12	None	None			
06/18/12	None	None			System down - flash mixer motor down
06/19/12	None	None			System down - flash mixer motor down
06/20/12	None	None			System down - flash mixer motor down
06/21/12	None	None			System down - flash mixer motor down
06/22/12	None	None			System down - flash mixer motor down
06/23/12	None	None			
06/24/12	None	None			
06/25/12	None	None			System down - flash mixer motor down
06/26/12	None	None			System down - flash mixer motor down
06/27/12	None	None			System down - flash mixer motor down
06/28/12	None	None			System down - flash mixer motor down
06/29/12	None	None			System down - flash mixer motor down
06/30/12	None	None			

Total Monthly Discharge (gal)

310,367

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - July 2012**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantities of Groundwater Discharged / Day - GAL	Notes
07/01/12	None	None			
07/02/12	None	None			System down - flash mixer motor down
07/03/12	None	None			System down - flash mixer motor down
07/04/12	None	None			System down - flash mixer motor down
07/05/12	None	None			System down - flash mixer motor down
07/06/12	None	None			System down - flash mixer motor down
07/07/12	None	None			
07/08/12	None	None			
07/09/12	None	None			System down - flash mixer motor down
07/10/12	None	None			System down - flash mixer motor down
07/11/12	None	None			System down - flash mixer motor down
07/12/12	None	None			System down - flash mixer motor down
07/13/12	None	None			System down - flash mixer motor down
07/14/12	None	None			
07/15/12	None	None			
07/16/12	None	None			System down - flash mixer motor down
07/17/12	None	None			System down - flash mixer motor down
07/18/12	None	None			System down - flash mixer motor down
07/19/12	None	None			System down - flash mixer motor down
07/20/12	None	None			System down - flash mixer motor down
07/21/12	None	None			
07/22/12	None	None			
07/23/12	None	None			System down - flash mixer motor down
07/24/12	None	None			System down - flash mixer motor down
07/25/12	None	None			System down - flash mixer motor down
07/26/12	None	None			System down - flash mixer motor down
07/27/12	None	None			System down - flash mixer motor down
07/28/12	None	None			
07/29/12	None	None			
07/30/12	None	None	On-Site	18,482	
07/31/12	None	None	On-site & Sampled	69,849	

Total Monthly Discharge (gal)

88,331

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - August 2012**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantities of Groundwater Discharged / Day - GAL	Notes
08/01/12	None	None	On-Site	45,692	
08/02/12	None	None	On-Site	38,096	
08/03/12	None	None	On-Site	33,777	
08/04/12	None	None			
08/05/12	None	None			
08/06/12	None	None	On-Site		
08/07/12	None	None	On-Site	42,053	
08/08/12	None	None	On-Site	35,243	
08/09/12	None	None	On-Site	34,191	
08/10/12	None	None			
08/11/12	None	None			
08/12/12	None	None			
08/13/12	None	None	On-Site	11,589	
08/14/12	None	None	On-Site	26,364	
08/15/12	None	None	On-site & Sampled	56,623	
08/16/12	None	None	On-Site	35,470	
08/17/12	None	None	On-Site	27,361	
08/18/12	None	None			
08/19/12	None	None			
08/20/12	None	None	On-Site	21,136	
08/21/12	None	None	On-Site	29,146	
08/22/12	None	None	On-Site	41,342	
08/23/12	None	None	On-Site	39,006	
08/24/12	None	None			
08/25/12	None	None			
08/26/12	None	None			
08/27/12	None	None	On-Site	13,783	
08/28/12	None	None	On-Site	24,865	
08/29/12	None	None	On-Site	43,445	
08/30/12	None	None	On-Site	40,879	
08/31/12	None	None	On-Site	4,891	

Total Monthly Discharge (gal)

644,951

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log- ISCO Sample Analyses - March 2012

	Permit Limits	5-11.5	3.98 mg/L	N/A	2.77 mg/L	
DATE	SAMPLE DATE	pH	(mg/L) NICKEL	(mg/L) HEX Cr	(mg/L) TOTAL Cr	NOTES
3/1/2012	3/1/2012					
3/2/2012	3/2/2012					
3/3/2012	3/3/2012					
3/4/2012	3/4/2012					
3/5/2012	3/5/2012					
3/6/2012	3/6/2012	8.50	0.07	0.00	0.00	
3/7/2012	3/7/2012	9.35	0.13	0.00	0.00	
3/8/2012	3/8/2012	9.30	0.17	0.00	0.00	
3/9/2012	3/9/2012	9.32	0.20	0.00	0.05	
3/10/2012	3/10/2012					
3/11/2012	3/11/2012					
3/12/2012	3/12/2012	9.48	0.20	0.00	0.00	
3/13/2012	3/13/2012	9.22	0.16	0.00	0.00	
3/14/2012	3/14/2012	9.42	0.13	0.00	0.00	
3/15/2012	3/15/2012	9.30	0.20	0.00	0.00	
3/16/2012	3/16/2012	8.97	0.40	0.00	0.00	
3/17/2012	3/17/2012					
3/18/2012	3/18/2012					
3/19/2012	3/19/2012	9.17	0.11	0.00	0.00	
3/20/2012	3/20/2012	9.40	0.21	0.00	0.00	
3/21/2012	3/21/2012	9.36	0.25	0.00	0.00	
3/22/2012	3/22/2012	9.33	0.29	0.00	0.00	
3/23/2012	3/23/2012	9.31	0.24	0.00	0.00	
3/24/2012	3/24/2012					
3/25/2012	3/25/2012					
3/26/2012	3/26/2012	9.06	0.07	0.00	0.00	
3/27/2012	3/27/2012	9.31	0.20	0.00	0.00	
3/28/2012	3/28/2012	9.30	0.20	0.00	0.00	
3/29/2012	3/29/2012	9.31	0.30	0.00	0.00	
3/30/2012	3/30/2012	9.26	0.23	0.00	0.00	
3/31/2012	3/31/2012					

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log- ISCO Sample Analyses - April 2012**

	Permit Limits	5-11.5	3.98 mg/L	N/A	2.77 mg/L	
DATE	SAMPLE DATE	pH	(mg/L) NICKEL	(mg/L) HEX Cr	(mg/L) TOTAL Cr	NOTES
4/1/2012	4/1/2012					
4/2/2012	4/2/2012	8.83	0.28	0.00	0.00	
4/3/2012	4/3/2012	9.06	0.60	0.00	0.00	
4/4/2012	4/4/2012	9.17	0.46	0.00	0.00	
4/5/2012	4/5/2012	9.12	0.54	0.00	0.00	
4/6/2012	4/6/2012					
4/7/2012	4/7/2012					
4/8/2012	4/8/2012					
4/9/2012	4/9/2012	9.22	0.20	0.00	0.00	
4/10/2012	4/10/2012	9.21	0.48	0.00	0.05	
4/11/2012	4/11/2012	9.02	0.46	0.00	0.05	
4/12/2012	4/12/2012	9.04	0.80	0.00	0.00	
4/13/2012	4/13/2012	8.73	1.10	0.00	0.00	
4/14/2012	4/14/2012					
4/15/2012	4/15/2012					
4/16/2012	4/16/2012	9.16	0.40	0.00	0.00	
4/17/2012	4/17/2012	9.08	0.40	0.00	0.05	
4/18/2012	4/18/2012	9.27	0.30	0.00	0.00	
4/19/2012	4/19/2012	9.35	0.55	0.00	0.00	
4/20/2012	4/20/2012	9.36	0.65	0.00	0.00	
4/21/2012	4/21/2012					
4/22/2012	4/22/2012					
4/23/2012	4/23/2012	9.04	0.55	0.00	0.00	
4/24/2012	4/24/2012	9.59	0.40	0.00	0.00	
4/25/2012	4/25/2012	9.50	0.55	0.00	0.00	
4/26/2012	4/26/2012	9.70	0.30	0.00	0.00	
4/27/2012	4/27/2012	9.64	0.30	0.00	0.00	
4/28/2012	4/28/2012					
4/29/2012	4/29/2012					
4/30/2012	4/30/2012	9.33	0.30	0.00	0.00	

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log- ISCO Sample Analyses - May 2012

	Permit Limits	5-11.5	3.98 mg/L	N/A	2.77 mg/L	
DATE	SAMPLE DATE	pH	(mg/L) NICKEL	(mg/L) HEX Cr	(mg/L) TOTAL Cr	NOTES
5/1/2012	5/1/2012	9.96	0.16	0.00	0.00	
5/2/2012	5/2/2012	9.74	0.37	0.00	0.00	
5/3/2012	5/3/2012	9.83	0.28	0.00	0.00	
5/4/2012	5/4/2012	9.79	0.31	0.00	0.00	
5/5/2012	5/5/2012					
5/6/2012	5/6/2012					
5/7/2012	5/7/2012	9.45	0.36	0.00	0.00	
5/8/2012	5/8/2012	9.86	0.55	0.00	0.00	
5/9/2012	5/9/2012	9.76	0.70	0.00	0.00	
5/10/2012	5/10/2012	9.84	0.60	0.00	0.00	
5/11/2012	5/11/2012	9.63	0.10	0.00	0.00	
5/12/2012	5/12/2012					
5/13/2012	5/13/2012					
5/14/2012	5/14/2012	9.30	0.10	0.00	0.00	
5/15/2012	5/15/2012	9.40	0.03	0.00	0.00	
5/16/2012	5/16/2012	9.41	0.05	0.00	0.00	
5/17/2012	5/17/2012	9.40	0.02	0.00	0.05	
5/18/2012	5/18/2012	9.38	0.01	0.00	0.05	
5/19/2012	5/19/2012					
5/20/2012	5/20/2012					
5/21/2012	5/21/2012	8.96	0.01	0.00	0.05	
5/22/2012	5/22/2012	9.38	0.03	0.00	0.05	
5/23/2012	5/23/2012	9.36	0.04	0.00	0.00	
5/24/2012	5/24/2012	9.35	0.02	0.00	0.00	
5/25/2012	5/25/2012	9.35	0.04	0.00	0.00	
5/26/2012	5/26/2012					
5/27/2012	5/27/2012					
5/28/2012	5/28/2012	8.87	0.04	0.00	0.00	
5/29/2012	5/29/2012	9.36	0.07	0.00	0.05	
5/30/2012	5/30/2012	9.33	0.04	0.00	0.00	
5/31/2012	5/31/2012	9.14	0.01	0.00	0.00	

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log- ISCO Sample Analyses - June 2012**

	Permit Limits	5-11.5	3.98 mg/L	N/A	2.77 mg/L	
DATE	SAMPLE DATE	pH	(mg/L) NICKEL	(mg/L) HEX Cr	(mg/L) TOTAL Cr	NOTES
6/1/2012	6/1/2012	9.16	0.00	0.00	0.00	
6/2/2012	6/2/2012					
6/3/2012	6/3/2012					
6/4/2012	6/4/2012	8.98	0.00	0.00	0.00	
6/5/2012	6/5/2012	9.20	0.20	0.00	0.05	
6/6/2012	6/6/2012	9.49	0.20	0.00	0.05	
6/7/2012	6/7/2012	9.44	0.04	0.00	0.00	
6/8/2012	6/8/2012	9.10	0.03	0.00	0.00	
6/9/2012	6/9/2012					
6/10/2012	6/10/2012					
6/11/2012	6/11/2012	9.00	0.03	0.00	0.00	
6/12/2012	6/12/2012	9.09	0.03	0.00	0.00	
6/13/2012	6/13/2012	9.33	0.03	0.00	0.00	
6/14/2012	6/14/2012	9.09	0.05	0.00	0.00	
6/15/2012	6/15/2012	9.10	0.08	0.00	0.00	
6/16/2012	6/16/2012					
6/17/2012	6/17/2012					
6/18/2012	6/18/2012					System down - flash mixer motor down
6/19/2012	6/19/2012					System down - flash mixer motor down
6/20/2012	6/20/2012					System down - flash mixer motor down
6/21/2012	6/21/2012					System down - flash mixer motor down
6/22/2012	6/22/2012					System down - flash mixer motor down
6/23/2012	6/23/2012					
6/24/2012	6/24/2012					
6/25/2012	6/25/2012					System down - flash mixer motor down
6/26/2012	6/26/2012					System down - flash mixer motor down
6/27/2012	6/27/2012					System down - flash mixer motor down
6/28/2012	6/28/2012					System down - flash mixer motor down
6/29/2012	6/29/2012					System down - flash mixer motor down
6/30/2012	6/30/2012					

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log- ISCO Sample Analyses - July 2012

	Permit Limits	5-11.5	3.98 mg/L	N/A	2.77 mg/L	
DATE	SAMPLE DATE	pH	(mg/L) NICKEL	(mg/L) HEX Cr	(mg/L) TOTAL Cr	NOTES
7/1/2012	7/1/2012					
7/2/2012	7/2/2012					System down - flash mixer motor down
7/3/2012	7/3/2012					System down - flash mixer motor down
7/4/2012	7/4/2012					System down - flash mixer motor down
7/5/2012	7/5/2012					System down - flash mixer motor down
7/6/2012	7/6/2012					System down - flash mixer motor down
7/7/2012	7/7/2012					
7/8/2012	7/8/2012					
7/9/2012	7/9/2012					System down - flash mixer motor down
7/10/2012	7/10/2012					System down - flash mixer motor down
7/11/2012	7/11/2012					System down - flash mixer motor down
7/12/2012	7/12/2012					System down - flash mixer motor down
7/13/2012	7/13/2012					System down - flash mixer motor down
7/14/2012	7/14/2012					
7/15/2012	7/15/2012					
7/16/2012	7/16/2012					System down - flash mixer motor down
7/17/2012	7/17/2012					System down - flash mixer motor down
7/18/2012	7/18/2012					System down - flash mixer motor down
7/19/2012	7/19/2012					System down - flash mixer motor down
7/20/2012	7/20/2012					System down - flash mixer motor down
7/21/2012	7/21/2012					
7/22/2012	7/22/2012					
7/23/2012	7/23/2012					System down - flash mixer motor down
7/24/2012	7/24/2012					System down - flash mixer motor down
7/25/2012	7/25/2012					System down - flash mixer motor down
7/26/2012	7/26/2012					System down - flash mixer motor down
7/27/2012	7/27/2012					System down - flash mixer motor down
7/28/2012	7/28/2012					
7/29/2012	7/29/2012					
7/30/2012	7/30/2012	8.47	0.05	0.00	0.15	
7/31/2012	7/31/2012	8.72	0.05	0.00	0.05	

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log- ISCO Sample Analyses - August 2012**

	Permit Limits	5-11.5	3.98 mg/L	N/A	2.77 mg/L	
DATE	SAMPLE DATE	pH	(mg/L) NICKEL	(mg/L) HEX Cr	(mg/L) TOTAL Cr	NOTES
8/1/2012	8/1/2012	9.15	0.04	0.00	0.05	
8/2/2012	8/2/2012	8.94	0.10	0.00	0.00	
8/3/2012	8/3/2012	8.85	0.05	0.00	0.00	
8/4/2012	8/4/2012					
8/5/2012	8/5/2012					
8/6/2012	8/6/2012	8.64	0.05	0.00	0.00	
8/7/2012	8/7/2012	9.03	0.09	0.00	0.00	
8/8/2012	8/8/2012	9.01	0.09	0.00	0.00	
8/9/2012	8/9/2012	9.04	0.05	0.00	0.00	
8/10/2012	8/10/2012					
8/11/2012	8/11/2012					
8/12/2012	8/12/2012					
8/13/2012	8/13/2012	8.55	0.03	0.00	0.25	
8/14/2012	8/14/2012	9.27	0.05	0.05	0.10	
8/15/2012	8/15/2012	9.15	0.02	0.05	0.10	
8/16/2012	8/16/2012	9.39	0.04	0.05	0.25	
8/17/2012	8/17/2012	9.04	0.05	0.05	0.10	
8/18/2012	8/18/2012					
8/19/2012	8/19/2012					
8/20/2012	8/20/2012	8.72	0.05	0.05	0.10	
8/21/2012	8/21/2012	9.56	0.08	0.00	0.05	
8/22/2012	8/22/2012	9.15	0.13	0.00	0.05	
8/23/2012	8/23/2012	9.01	0.15	0.00	0.05	
8/24/2012	8/24/2012					
8/25/2012	8/25/2012					
8/26/2012	8/26/2012					
8/27/2012	8/27/2012	8.80	0.15	0.00	0.05	
8/28/2012	8/28/2012	9.08	0.01	0.00	0.00	
8/29/2012	8/29/2012	9.12	0.02	0.00	0.10	
8/30/2012	8/30/2012	9.25	0.04	0.00	0.05	
8/31/2012	8/31/2012	8.89	0.05	0.00	0.05	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica North Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-9245-1

Client Project/Site: 12607-T01-005, RACER Livonia

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Mr. Paul Wiseman



Authorized for release by:

3/23/2012 8:58:22 AM

Denise Heckler

Project Manager II

denise.heckler@testamericainc.com

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Job ID: 240-9245-1

Laboratory: TestAmerica North Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12607-T01-005, RACER Livonia

Report Number: 240-9245-1

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 North 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 03/15/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.1 C.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample WT-12607-031412-EE-001 (240-9245-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 03/15/2012 and analyzed on 03/16/2012.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample WT-12607-031412-EE-001 (240-9245-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 03/19/2012 and analyzed on 03/21/2012.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Job ID: 240-9245-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

MERCURY

Sample WT-12607-031412-EE-001 (240-9245-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 03/20/2012 and analyzed on 03/21/2012.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Sample WT-12607-031412-EE-001 (240-9245-1) was analyzed for total suspended solids in accordance with EPA Method 160.2. The samples were analyzed on 03/19/2012.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

HEM

Sample WT-12607-031412-EE-001 (240-9245-1) was analyzed for HEM in accordance with EPA Method 1664A. The samples were prepared and analyzed on 03/22/2012.

No other difficulties were encountered during the HEM analysis.

All other quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Sample WT-12607-031412-EE-001 (240-9245-1) was analyzed for hexavalent chromium in accordance with SM 3500 CR D. The samples were analyzed on 03/15/2012.

Cr (VI) exceeded the rpd limit for the MSD of sample WT-12607-031412-EE-001MSD (240-9245-1) in batch 240-36967.

No other difficulties were encountered during the hexavalent chromium analysis.

All other quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Qualifiers

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.
F	RPD of the MS and MSD exceeds the control limits

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
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-9245-1	WT-12607-031412-EE-001	Water	03/14/12 15:30	03/15/12 09:20

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Client Sample ID: WT-12607-031412-EE-001

Lab Sample ID: 240-9245-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.12		0.010	mg/L	1		200.7 Rev 4.4	Total Recovera

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Method	Method Description	Protocol	Laboratory
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL NC
200.7 Rev 4.4	Metals (ICP)	EPA	TAL NC
245.1	Mercury (CVAA)	EPA	TAL NC
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL NC
1664A	HEM and SGT-HEM	1664A	TAL NC
SM 3500 CR D	Chromium, Hexavalent	SM	TAL NC

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

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

Client Sample ID: WT-12607-031412-EE-001

Date Collected: 03/14/12 15:30

Date Received: 03/15/12 09:20

Lab Sample ID: 240-9245-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Aroclor-1221	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Aroclor-1232	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Aroclor-1242	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Aroclor-1248	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Aroclor-1254	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Aroclor-1260	0.095	U	0.095	ug/L		03/15/12 12:02	03/16/12 23:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	62		10 - 114			03/15/12 12:02	03/16/12 23:07	1
Tetrachloro-m-xylene	82		15 - 131			03/15/12 12:02	03/16/12 23:07	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

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

Client Sample ID: WT-12607-031412-EE-001

Date Collected: 03/14/12 15:30

Date Received: 03/15/12 09:20

Lab Sample ID: 240-9245-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		03/19/12 06:27	03/21/12 16:51	1
Nickel	0.12		0.010	mg/L		03/19/12 06:27	03/21/12 16:51	1
Lead	0.050	U	0.050	mg/L		03/19/12 06:27	03/21/12 16:51	1
Zinc	0.020	U	0.020	mg/L		03/19/12 06:27	03/21/12 16:51	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: WT-12607-031412-EE-001

Date Collected: 03/14/12 15:30

Date Received: 03/15/12 09:20

Lab Sample ID: 240-9245-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		03/20/12 14:50	03/21/12 13:39	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

General Chemistry

Client Sample ID: WT-12607-031412-EE-001

Date Collected: 03/14/12 15:30

Date Received: 03/15/12 09:20

Lab Sample ID: 240-9245-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			03/19/12 09:41	1
HEM	4.8	U	4.8	mg/L		03/22/12 14:50	03/22/12 16:02	1
Cr (VI)	0.0050	U	0.0050	mg/L			03/15/12 14:22	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

GC Semi VOA

Prep Batch: 36940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	3510C	
LCS 240-36940/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-36940/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 36978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	608	36940
LCS 240-36940/2-A	Lab Control Sample	Total/NA	Water	608	36940
MB 240-36940/1-A	Method Blank	Total/NA	Water	608	36940

Metals

Prep Batch: 37130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total Recoverable	Water	200.7	
240-9245-1 MS	WT-12607-031412-EE-001	Total Recoverable	Water	200.7	
240-9245-1 MSD	WT-12607-031412-EE-001	Total Recoverable	Water	200.7	
LCS 240-37130/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-37130/1-A	Method Blank	Total Recoverable	Water	200.7	

Prep Batch: 37328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	245.1	
LCS 240-37328/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-37328/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 37493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total Recoverable	Water	200.7 Rev 4.4	37130
240-9245-1 MS	WT-12607-031412-EE-001	Total Recoverable	Water	200.7 Rev 4.4	37130
240-9245-1 MSD	WT-12607-031412-EE-001	Total Recoverable	Water	200.7 Rev 4.4	37130
LCS 240-37130/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	37130
MB 240-37130/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	37130

Analysis Batch: 37631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	245.1	37328
LCS 240-37328/2-A	Lab Control Sample	Total/NA	Water	245.1	37328
MB 240-37328/1-A	Method Blank	Total/NA	Water	245.1	37328

General Chemistry

Analysis Batch: 36967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	SM 3500 CR D	
240-9245-1 MS	WT-12607-031412-EE-001	Total/NA	Water	SM 3500 CR D	
240-9245-1 MSD	WT-12607-031412-EE-001	Total/NA	Water	SM 3500 CR D	
LCS 240-36967/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 240-36967/3	Method Blank	Total/NA	Water	SM 3500 CR D	

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

General Chemistry (Continued)

Analysis Batch: 37168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	160.2	
LCS 240-37168/2	Lab Control Sample	Total/NA	Water	160.2	
MB 240-37168/1	Method Blank	Total/NA	Water	160.2	

Prep Batch: 37664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	1664A	
LCS 240-37664/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 240-37664/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 37704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9245-1	WT-12607-031412-EE-001	Total/NA	Water	1664A	37664
LCS 240-37664/2-A	Lab Control Sample	Total/NA	Water	1664A	37664
MB 240-37664/1-A	Method Blank	Total/NA	Water	1664A	37664

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

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

Lab Sample ID: MB 240-36940/1-A

Matrix: Water

Analysis Batch: 36978

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36940

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1
Aroclor-1221	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1
Aroclor-1232	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1
Aroclor-1242	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1
Aroclor-1248	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1
Aroclor-1254	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1
Aroclor-1260	0.10	U	0.10	ug/L		03/15/12 11:53	03/16/12 23:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83		10 - 114	03/15/12 11:53	03/16/12 23:36	1
Tetrachloro-m-xylene	95		15 - 131	03/15/12 11:53	03/16/12 23:36	1

Lab Sample ID: LCS 240-36940/2-A

Matrix: Water

Analysis Batch: 36978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	10.0	9.12		ug/L		91	50 - 114
Aroclor-1260	10.0	9.00		ug/L		90	8 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	88		10 - 114
Tetrachloro-m-xylene	88		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-37130/1-A

Matrix: Water

Analysis Batch: 37493

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 37130

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		03/19/12 06:27	03/21/12 16:39	1
Nickel	0.010	U	0.010	mg/L		03/19/12 06:27	03/21/12 16:39	1
Lead	0.050	U	0.050	mg/L		03/19/12 06:27	03/21/12 16:39	1
Zinc	0.020	U	0.020	mg/L		03/19/12 06:27	03/21/12 16:39	1

Lab Sample ID: LCS 240-37130/2-A

Matrix: Water

Analysis Batch: 37493

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 37130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.197		mg/L		98	85 - 115
Nickel	0.500	0.480		mg/L		96	85 - 115
Lead	0.500	0.483		mg/L		97	85 - 115
Zinc	0.500	0.517		mg/L		103	85 - 115

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

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

Lab Sample ID: 240-9245-1 MS

Matrix: Water

Analysis Batch: 37493

Client Sample ID: WT-12607-031412-EE-001

Prep Type: Total Recoverable

Prep Batch: 37130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.050	U	0.200	0.224		mg/L		101	75 - 125
Nickel	0.12		0.500	0.604		mg/L		97	75 - 125
Lead	0.050	U	0.500	0.488		mg/L		98	75 - 125
Zinc	0.020	U	0.500	0.514		mg/L		103	75 - 125

Lab Sample ID: 240-9245-1 MSD

Matrix: Water

Analysis Batch: 37493

Client Sample ID: WT-12607-031412-EE-001

Prep Type: Total Recoverable

Prep Batch: 37130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	0.050	U	0.200	0.206		mg/L		92	75 - 125	8	20
Nickel	0.12		0.500	0.563		mg/L		89	75 - 125	7	20
Lead	0.050	U	0.500	0.455		mg/L		91	75 - 125	7	20
Zinc	0.020	U	0.500	0.479		mg/L		96	75 - 125	7	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-37328/1-A

Matrix: Water

Analysis Batch: 37631

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37328

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		03/20/12 14:50	03/21/12 13:24	1

Lab Sample ID: LCS 240-37328/2-A

Matrix: Water

Analysis Batch: 37631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00493		mg/L		99	85 - 115

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-37168/1

Matrix: Water

Analysis Batch: 37168

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			03/19/12 09:41	1

Lab Sample ID: LCS 240-37168/2

Matrix: Water

Analysis Batch: 37168

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	87.7	80.0		mg/L		91	73 - 113

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-37664/1-A

Matrix: Water

Analysis Batch: 37704

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37664

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L		03/22/12 11:09	03/22/12 13:48	1

Lab Sample ID: LCS 240-37664/2-A

Matrix: Water

Analysis Batch: 37704

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	32.2		mg/L		81	78 - 114

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 240-36967/3

Matrix: Water

Analysis Batch: 36967

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0050	U	0.0050	mg/L			03/15/12 14:18	1

Lab Sample ID: LCS 240-36967/4

Matrix: Water

Analysis Batch: 36967

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.250		mg/L		100	80 - 118

Lab Sample ID: 240-9245-1 MS

Matrix: Water

Analysis Batch: 36967

Client Sample ID: WT-12607-031412-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.0050	U	0.250	0.106		mg/L		41	41 - 136

Lab Sample ID: 240-9245-1 MSD

Matrix: Water

Analysis Batch: 36967

Client Sample ID: WT-12607-031412-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	0.0050	U	0.250	0.143	F	mg/L		56	41 - 136	30	20

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB2 (10-114)	TCX2 (15-131)
240-9245-1	WT-12607-031412-EE-001	62	82
LCS 240-36940/2-A	Lab Control Sample	88	88
MB 240-36940/1-A	Method Blank	83	95

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Client Sample ID: WT-12607-031412-EE-001

Lab Sample ID: 240-9245-1

Date Collected: 03/14/12 15:30

Matrix: Water

Date Received: 03/15/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			36940	03/15/12 12:02	EM	TAL NC
Total/NA	Analysis	608		1	36978	03/16/12 23:07	CV	TAL NC
Total Recoverable	Prep	200.7			37130	03/19/12 06:27	LM	TAL NC
Total Recoverable	Analysis	200.7 Rev 4.4		1	37493	03/21/12 16:51	BD	TAL NC
Total/NA	Prep	245.1			37328	03/20/12 14:50	AS	TAL NC
Total/NA	Analysis	245.1		1	37631	03/21/12 13:39	AS	TAL NC
Total/NA	Analysis	SM 3500 CR D		1	36967	03/15/12 14:22	BR	TAL NC
Total/NA	Analysis	160.2		1	37168	03/19/12 09:41	BR	TAL NC
Total/NA	Prep	1664A			37664	03/22/12 14:50	BR	TAL NC
Total/NA	Analysis	1664A		1	37704	03/22/12 16:02	BR	TAL NC

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01-005, RACER Livonia

TestAmerica Job ID: 240-9245-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica North Canton	California	NELAC	9	01144CA
TestAmerica North Canton	Connecticut	State Program	1	PH-0590
TestAmerica North Canton	Florida	NELAC	4	E87225
TestAmerica North Canton	Georgia	State Program	4	N/A
TestAmerica North Canton	Illinois	NELAC	5	200004
TestAmerica North Canton	Kansas	NELAC	7	E-10336
TestAmerica North Canton	Kentucky	State Program	4	58
TestAmerica North Canton	L-A-B	DoD ELAP		L2315
TestAmerica North Canton	Minnesota	NELAC	5	039-999-348
TestAmerica North Canton	Nevada	State Program	9	OH-000482008A
TestAmerica North Canton	New Jersey	NELAC	2	OH001
TestAmerica North Canton	New York	NELAC	2	10975
TestAmerica North Canton	Ohio VAP	State Program	5	CL0024
TestAmerica North Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica North Canton	USDA	Federal		P330-11-00328
TestAmerica North Canton	Virginia	NELAC Secondary AB	3	460175
TestAmerica North Canton	Washington	State Program	10	C971
TestAmerica North Canton	West Virginia DEP	State Program	3	210
TestAmerica North Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



**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- 08424**

PAGE OF

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 12607-T01Y12-005				Laboratory Name: Test America				Lab Location: N Canton, OH				SSOW ID: 12607-T01Y12-005	
Project Name: RACER Livonia GWTP				Lab Contact: Denise Heckler				Lab Quote No:				Cooler No:	
Project Location: Livonia, MI				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)				Carrier: Fed Ex	
Chemistry Contact: Paul Wiseman (CRA)				SAMPLE TYPE				Unpreserved				Airbill No:	
Sampler(s): Erik Engnell (CRA)				Grab (g) or Comp (c)				Hydrochloric Acid (HCl)				Date Shipped: 3/14/2012	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)				DATE (mm/dd/yyyy)				TIME (hh:mm)				COMMENTS/ SPECIAL INSTRUCTIONS:	
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TestAmerica North Canton Sample Receipt Form/Narrative

Login # : 9245

Client CRA

Site Name RACER Livonia

By: Mike G. [Signature]
(Signature)

Cooler Received on 3/15/12

Opened on 3/15/12

FedEx: 1st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐TestAmerica Cooler # TA no # ☐ Foam Box ☐ Client Cooler ☐ Multiple on Back ☐ 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# 1 (CF -2°C) Sample Temp _____ °C Corrected Temp _____ °C

IR GUN# 4G (CF -1°C) Sample Temp _____ °C Corrected Temp _____ °C

IR GUN# 5G (CF -1°C) Sample Temp _____ °C Corrected Temp _____ °C

IR GUN# 6Y (CF -2°C) Sample Temp 10.1 °C Corrected Temp 4.1 °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes ☒ No ☐-Were custody seals on the outside of the cooler(s) signed & dated? Yes ☐ No ☒ NA-Were custody seals on the bottle(s)? Yes ☒ No ☐3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☐ No4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No6. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No7. Could all bottle labels be reconciled with the COC? ☒ Yes ☐ No8. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No9. Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No10. Were sample(s) at the correct pH upon receipt? ☒ Yes ☐ No ☐ NA11. Were VOAs on the COC? Yes ☒ No ☐12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA13. 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

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)

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Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-9245-1

Login Number: 9245

List Source: TestAmerica North Canton

List Number: 1

Creator: Gambone, Mike

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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	4.1
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	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: 240-10638-1

Client Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Mr. Paul Wiseman



Authorized for release by:

5/10/2012 11:51:50 AM

Nathan Pietras

Project Manager II

nathan.pietras@testamericainc.com

Designee for

Denise Heckler

Project Manager II

denise.heckler@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Job ID: 240-10638-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12607-TO1-005, RACER Livonia/Eckles Rd

Report Number: 240-10638-1

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 North 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 04/26/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.7 C.

Method(s) SM 3500 CR D: The following sample(s) was received outside of holding time: WT-12607-042512-EE-001 (240-10638-1).

Method(s) 608: One or more containers for the following sample was received broken or leaking: WT-12607-042512-EE-001 (240-10638-1). 1XL PCB.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample WT-12607-042512-EE-001 (240-10638-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 05/07/2012 and analyzed on 05/08/2012.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample WT-12607-042512-EE-001 (240-10638-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Job ID: 240-10638-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

Zinc was detected in method blank MB 240-41956/1-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 "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

MERCURY

Sample WT-12607-042512-EE-001 (240-10638-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

Mercury was detected in method blank MB 240-41887/1-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 "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analysis.

All other quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Sample WT-12607-042512-EE-001 (240-10638-1) was analyzed for total suspended solids in accordance with EPA Method 160.2. The samples were analyzed on 04/27/2012.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

1664A

Sample WT-12607-042512-EE-001 (240-10638-1) was analyzed for 1664A in accordance with EPA Method 1664A. The samples were prepared and analyzed on 04/27/2012.

No difficulties were encountered during the HEM analysis.

All quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Sample WT-12607-042512-EE-001 (240-10638-1) was analyzed for hexavalent chromium in accordance with SM 3500 CR D. The samples were analyzed on 04/26/2012.

Method(s) 7196A, SM 3500 CR D: The following samples were received with greater than 50% of holding time expired: WT-12607-042512-EE-001 (240-10638-1). As such, the laboratory had insufficient time remaining to perform the analysis within holding time.

No other difficulties were encountered during the hexavalent chromium analysis.

All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Qualifiers

GC Semi VOA

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

Metals

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

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-10638-1	WT-12607-042512-EE-001	Water	04/24/12 13:30	04/26/12 09:15

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Client Sample ID: WT-12607-042512-EE-001

Lab Sample ID: 240-10638-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.011	J	0.050	0.0022	mg/L	1		200.7 Rev 4.4	Total
Nickel	0.56		0.010	0.0032	mg/L	1		200.7 Rev 4.4	Recoverable Total
Total Suspended Solids	4.0		4.0	1.8	mg/L	1		160.2	Recoverable Total/NA

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Method	Method Description	Protocol	Laboratory
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL NC
200.7 Rev 4.4	Metals (ICP)	EPA	TAL NC
245.1	Mercury (CVAA)	EPA	TAL NC
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL NC
1664A	HEM and SGT-HEM	1664A	TAL NC
SM 3500 CR D	Chromium, Hexavalent	SM	TAL NC

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

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

Client Sample ID: WT-12607-042512-EE-001

Date Collected: 04/24/12 13:30

Date Received: 04/26/12 09:15

Lab Sample ID: 240-10638-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		05/07/12 09:41	05/08/12 10:03	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		05/07/12 09:41	05/08/12 10:03	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/07/12 09:41	05/08/12 10:03	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		05/07/12 09:41	05/08/12 10:03	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		05/07/12 09:41	05/08/12 10:03	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		05/07/12 09:41	05/08/12 10:03	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		05/07/12 09:41	05/08/12 10:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	55		10 - 114				05/07/12 09:41	05/08/12 10:03	1
Tetrachloro-m-xylene	81		15 - 131				05/07/12 09:41	05/08/12 10:03	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

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

Client Sample ID: WT-12607-042512-EE-001

Date Collected: 04/24/12 13:30

Date Received: 04/26/12 09:15

Lab Sample ID: 240-10638-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.011	J	0.050	0.0022	mg/L		04/27/12 13:42	04/28/12 10:42	1
Nickel	0.56		0.010	0.0032	mg/L		04/27/12 13:42	04/28/12 10:42	1
Lead	0.050	U	0.050	0.0019	mg/L		04/27/12 13:42	04/28/12 10:42	1
Zinc	0.020	U	0.020	0.0050	mg/L		04/27/12 13:42	04/28/12 10:42	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: WT-12607-042512-EE-001

Date Collected: 04/24/12 13:30

Date Received: 04/26/12 09:15

Lab Sample ID: 240-10638-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.00012	mg/L		04/27/12 12:40	04/28/12 13:42	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

General Chemistry

Client Sample ID: WT-12607-042512-EE-001

Date Collected: 04/24/12 13:30

Date Received: 04/26/12 09:15

Lab Sample ID: 240-10638-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0		4.0	1.8	mg/L			04/27/12 10:56	1
HEM	4.7	U	4.7	0.73	mg/L		04/27/12 14:30	04/27/12 15:29	1
Cr (VI)	0.0050	U H	0.0050	0.0020	mg/L			04/26/12 10:19	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

GC Semi VOA

Prep Batch: 42992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	3510C	
LCS 240-42992/5-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-42992/4-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 43115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	608	42992
LCS 240-42992/5-A	Lab Control Sample	Total/NA	Water	608	42992
MB 240-42992/4-A	Method Blank	Total/NA	Water	608	42992

Metals

Prep Batch: 41887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	245.1	
LCS 240-41887/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-41887/1-A	Method Blank	Total/NA	Water	245.1	

Prep Batch: 41956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total Recoverable	Water	200.7	
LCS 240-41956/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-41956/1-A	Method Blank	Total Recoverable	Water	200.7	

Analysis Batch: 42110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total Recoverable	Water	200.7 Rev 4.4	41956
LCS 240-41956/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	41956
MB 240-41956/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	41956

Analysis Batch: 42155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	245.1	41887
LCS 240-41887/2-A	Lab Control Sample	Total/NA	Water	245.1	41887
MB 240-41887/1-A	Method Blank	Total/NA	Water	245.1	41887

General Chemistry

Analysis Batch: 41688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	SM 3500 CR D	
240-10638-1 MS	WT-12607-042512-EE-001	Total/NA	Water	SM 3500 CR D	
240-10638-1 MSD	WT-12607-042512-EE-001	Total/NA	Water	SM 3500 CR D	
LCS 240-41688/10	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 240-41688/9	Method Blank	Total/NA	Water	SM 3500 CR D	

Analysis Batch: 41898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	160.2	
LCS 240-41898/2	Lab Control Sample	Total/NA	Water	160.2	
MB 240-41898/1	Method Blank	Total/NA	Water	160.2	

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

General Chemistry (Continued)

Prep Batch: 41965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	1664A	
240-10638-1 MS	WT-12607-042512-EE-001	Total/NA	Water	1664A	
LCS 240-41965/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 240-41965/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 41973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10638-1	WT-12607-042512-EE-001	Total/NA	Water	1664A	41965
240-10638-1 MS	WT-12607-042512-EE-001	Total/NA	Water	1664A	41965
LCS 240-41965/2-A	Lab Control Sample	Total/NA	Water	1664A	41965
MB 240-41965/1-A	Method Blank	Total/NA	Water	1664A	41965

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

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

Lab Sample ID: MB 240-42992/4-A

Matrix: Water

Analysis Batch: 43115

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.044	ug/L		05/07/12 09:41	05/08/12 10:34	1
Aroclor-1221	0.10	U	0.10	0.045	ug/L		05/07/12 09:41	05/08/12 10:34	1
Aroclor-1232	0.10	U	0.10	0.073	ug/L		05/07/12 09:41	05/08/12 10:34	1
Aroclor-1242	0.10	U	0.10	0.060	ug/L		05/07/12 09:41	05/08/12 10:34	1
Aroclor-1248	0.10	U	0.10	0.061	ug/L		05/07/12 09:41	05/08/12 10:34	1
Aroclor-1254	0.10	U	0.10	0.032	ug/L		05/07/12 09:41	05/08/12 10:34	1
Aroclor-1260	0.10	U	0.10	0.038	ug/L		05/07/12 09:41	05/08/12 10:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	55		10 - 114	05/07/12 09:41	05/08/12 10:34	1
Tetrachloro-m-xylene	80		15 - 131	05/07/12 09:41	05/08/12 10:34	1

Lab Sample ID: LCS 240-42992/5-A

Matrix: Water

Analysis Batch: 43115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.14		ug/L		86	50 - 114
Aroclor-1260	2.50	2.08		ug/L		83	8 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	60		10 - 114
Tetrachloro-m-xylene	69		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-41956/1-A

Matrix: Water

Analysis Batch: 42110

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 41956

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	0.0022	mg/L		04/27/12 13:42	04/28/12 09:52	1
Nickel	0.010	U	0.010	0.0032	mg/L		04/27/12 13:42	04/28/12 09:52	1
Lead	0.050	U	0.050	0.0019	mg/L		04/27/12 13:42	04/28/12 09:52	1
Zinc	0.0195	J	0.020	0.0050	mg/L		04/27/12 13:42	04/28/12 09:52	1

Lab Sample ID: LCS 240-41956/2-A

Matrix: Water

Analysis Batch: 42110

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 41956

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.202		mg/L		101	85 - 115
Nickel	0.500	0.500		mg/L		100	85 - 115
Lead	0.500	0.498		mg/L		100	85 - 115
Zinc	0.500	0.525		mg/L		105	85 - 115

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-41887/1-A

Matrix: Water

Analysis Batch: 42155

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000179	J	0.00020	0.00012	mg/L		04/27/12 12:40	04/28/12 12:56	1

Lab Sample ID: LCS 240-41887/2-A

Matrix: Water

Analysis Batch: 42155

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00454		mg/L		91	85 - 115

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-41898/1

Matrix: Water

Analysis Batch: 41898

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	1.8	mg/L			04/27/12 10:56	1

Lab Sample ID: LCS 240-41898/2

Matrix: Water

Analysis Batch: 41898

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	39.1	35.0		mg/L		90	73 - 113

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-41965/1-A

Matrix: Water

Analysis Batch: 41973

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	0.77	mg/L		04/27/12 14:30	04/27/12 15:29	1

Lab Sample ID: LCS 240-41965/2-A

Matrix: Water

Analysis Batch: 41973

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	34.0		mg/L		85	78 - 114

Lab Sample ID: 240-10638-1 MS

Matrix: Water

Analysis Batch: 41973

Client Sample ID: WT-12607-042512-EE-001

Prep Type: Total/NA

Prep Batch: 41965

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	4.7	U	37.8	37.0		mg/L		98	78 - 114

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 240-41688/9

Matrix: Water

Analysis Batch: 41688

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0050	U	0.0050	0.0020	mg/L			04/26/12 10:06	1

Lab Sample ID: LCS 240-41688/10

Matrix: Water

Analysis Batch: 41688

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.248		mg/L		99	80 - 118

Lab Sample ID: 240-10638-1 MS

Matrix: Water

Analysis Batch: 41688

Client Sample ID: WT-12607-042512-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.0050	U H	0.250	0.114		mg/L		46	41 - 136

Lab Sample ID: 240-10638-1 MSD

Matrix: Water

Analysis Batch: 41688

Client Sample ID: WT-12607-042512-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	0.0050	U H	0.250	0.116		mg/L		46	41 - 136	1	20

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-114)	TCX1 (15-131)
240-10638-1	WT-12607-042512-EE-001	55	81
LCS 240-42992/5-A	Lab Control Sample	60	69
MB 240-42992/4-A	Method Blank	55	80

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Client Sample ID: WT-12607-042512-EE-001

Lab Sample ID: 240-10638-1

Date Collected: 04/24/12 13:30

Matrix: Water

Date Received: 04/26/12 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			42992	05/07/12 09:41	SE	TAL NC
Total/NA	Analysis	608		1	43115	05/08/12 10:03	RK	TAL NC
Total Recoverable	Prep	200.7			41956	04/27/12 13:42	AS	TAL NC
Total Recoverable	Analysis	200.7 Rev 4.4		1	42110	04/28/12 10:42	NJM	TAL NC
Total/NA	Prep	245.1			41887	04/27/12 12:40	CN	TAL NC
Total/NA	Analysis	245.1		1	42155	04/28/12 13:42	AS	TAL NC
Total/NA	Analysis	SM 3500 CR D		1	41688	04/26/12 10:19	BW	TAL NC
Total/NA	Analysis	160.2		1	41898	04/27/12 10:56	AM	TAL NC
Total/NA	Prep	1664A			41965	04/27/12 14:30	JM	TAL NC
Total/NA	Analysis	1664A		1	41973	04/27/12 15:29	JM	TAL NC

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 12607-TO1-005, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-10638-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

[illegible]

TestAmerica North Canton Sample Receipt Form/Narrative

Login # : 10638

Client Roca Linsonia GUTP Site Name _____By: Rita Mills

(Signature)

Cooler Received on 4-26-12 Opened on 4-26-12FedEx: 1st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____TestAmerica Cooler # None 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# 1 (CF -2°C) Observed Sample Temp. 2.7 °C Corrected Sample Temp. 0.7 °C

IR GUN# 4G (CF -1°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

IR GUN# 5G (CF -1°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

IR GUN# 6Y (CF -2°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

☐ Multiple
on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____

Yes ☒ No ☐

-Were custody seals on the outside of the cooler(s) signed & dated?

Yes ☐ No ☒ NA

-Were custody seals on the bottle(s)?

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

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 ALM Date 4/26/12 by ALM via ☒ Verbal ☐ Voice Mail ☐ OtherConcerning #18

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

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

Sample(s) 1xL WT-12607-042512-EE-001 were received in a broken container.

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

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-10638-1

Login Number: 10638

List Source: TestAmerica Canton

List Number: 1

Creator: Maddux, Ann

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	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: 240-11156-1

Client Project/Site: 12607-TO1-005, RACER Livonia GWTP

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Mr. Paul Wiseman



Authorized for release by:

5/24/2012 7:42:00 AM

Denise Heckler

Project Manager II

denise.heckler@testamericainc.com

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Job ID: 240-11156-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12607-TO1-005, RACER Livonia GWTP

Report Number: 240-11156-1

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 North 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 05/10/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.7 C.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample WT-12607-050912-EE-001 (240-11156-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared and analyzed on 05/11/2012.

DCB Decachlorobiphenyl failed the surrogate recovery criteria high for MB 240-43686/3-A. DCB Decachlorobiphenyl failed the surrogate recovery criteria high for LCS 240-43686/4-A. 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.

No other difficulties were encountered during the PCBs analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample WT-12607-050912-EE-001 (240-11156-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 05/11/2012 and analyzed on 05/14/2012.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Job ID: 240-11156-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

No difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

MERCURY

Sample WT-12607-050912-EE-001 (240-11156-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 05/11/2012 and analyzed on 05/15/2012.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Sample WT-12607-050912-EE-001 (240-11156-1) was analyzed for total suspended solids in accordance with EPA Method 160.2. The samples were analyzed on 05/14/2012.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

HEM

Sample WT-12607-050912-EE-001 (240-11156-1) was analyzed for HEM in accordance with EPA Method 1664A. The samples were prepared and analyzed on 05/21/2012.

No difficulties were encountered during the HEM analysis.

All quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Sample WT-12607-050912-EE-001 (240-11156-1) was analyzed for hexavalent chromium in accordance with SM 3500 CR D. The samples were analyzed on 05/10/2012.

No difficulties were encountered during the hexavalent chromium analysis.

All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

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.

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
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-11156-1	WT-12607-050912-EE-001	Water	05/09/12 15:30	05/10/12 09:30

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Client Sample ID: WT-12607-050912-EE-001

Lab Sample ID: 240-11156-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.64		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Method	Method Description	Protocol	Laboratory
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL NC
200.7 Rev 4.4	Metals (ICP)	EPA	TAL NC
245.1	Mercury (CVAA)	EPA	TAL NC
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL NC
1664A	HEM and SGT-HEM	1664A	TAL NC
SM 3500 CR D	Chromium, Hexavalent	SM	TAL NC

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

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

Client Sample ID: WT-12607-050912-EE-001

Lab Sample ID: 240-11156-1

Date Collected: 05/09/12 15:30

Matrix: Water

Date Received: 05/10/12 09:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042 ug/L		05/11/12 08:48	05/11/12 19:48	1
Aroclor-1221	0.095	U	0.095	0.043 ug/L		05/11/12 08:48	05/11/12 19:48	1
Aroclor-1232	0.095	U	0.095	0.070 ug/L		05/11/12 08:48	05/11/12 19:48	1
Aroclor-1242	0.095	U	0.095	0.057 ug/L		05/11/12 08:48	05/11/12 19:48	1
Aroclor-1248	0.095	U	0.095	0.058 ug/L		05/11/12 08:48	05/11/12 19:48	1
Aroclor-1254	0.095	U	0.095	0.030 ug/L		05/11/12 08:48	05/11/12 19:48	1
Aroclor-1260	0.095	U	0.095	0.036 ug/L		05/11/12 08:48	05/11/12 19:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	78		10 - 114	05/11/12 08:48	05/11/12 19:48	1
Tetrachloro-m-xylene	67		15 - 131	05/11/12 08:48	05/11/12 19:48	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

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

Client Sample ID: WT-12607-050912-EE-001

Date Collected: 05/09/12 15:30

Date Received: 05/10/12 09:30

Lab Sample ID: 240-11156-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		05/11/12 10:40	05/14/12 13:12	1
Nickel	0.64		0.010	mg/L		05/11/12 10:40	05/14/12 13:12	1
Lead	0.050	U	0.050	mg/L		05/11/12 10:40	05/14/12 13:12	1
Zinc	0.020	U	0.020	mg/L		05/11/12 10:40	05/14/12 13:12	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: WT-12607-050912-EE-001

Date Collected: 05/09/12 15:30

Date Received: 05/10/12 09:30

Lab Sample ID: 240-11156-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.00012 mg/L		05/11/12 14:50	05/15/12 11:05	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

General Chemistry

Client Sample ID: WT-12607-050912-EE-001

Date Collected: 05/09/12 15:30

Date Received: 05/10/12 09:30

Lab Sample ID: 240-11156-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	1.8 mg/L			05/14/12 11:08	1
HEM	4.8	U	4.8	0.73 mg/L		05/21/12 10:58	05/21/12 11:45	1
Cr (VI)	0.0050	U	0.0050	0.0020 mg/L			05/10/12 11:39	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

GC Semi VOA

Prep Batch: 43686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	3510C	
LCS 240-43686/4-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-43686/3-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 43782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	608	43686
LCS 240-43686/4-A	Lab Control Sample	Total/NA	Water	608	43686
MB 240-43686/3-A	Method Blank	Total/NA	Water	608	43686

Metals

Prep Batch: 43717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total Recoverable	Water	200.7	
240-11156-1 MS	WT-12607-050912-EE-001	Total Recoverable	Water	200.7	
240-11156-1 MSD	WT-12607-050912-EE-001	Total Recoverable	Water	200.7	
LCS 240-43717/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-43717/1-A	Method Blank	Total Recoverable	Water	200.7	

Prep Batch: 43721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	245.1	
LCS 240-43721/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-43721/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 44019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total Recoverable	Water	200.7 Rev 4.4	43717
240-11156-1 MS	WT-12607-050912-EE-001	Total Recoverable	Water	200.7 Rev 4.4	43717
240-11156-1 MSD	WT-12607-050912-EE-001	Total Recoverable	Water	200.7 Rev 4.4	43717
LCS 240-43717/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	43717
MB 240-43717/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	43717

Analysis Batch: 44211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	245.1	43721
LCS 240-43721/2-A	Lab Control Sample	Total/NA	Water	245.1	43721
MB 240-43721/1-A	Method Blank	Total/NA	Water	245.1	43721

General Chemistry

Analysis Batch: 43580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	SM 3500 CR D	
LCS 240-43580/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 240-43580/3	Method Blank	Total/NA	Water	SM 3500 CR D	

Analysis Batch: 43925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	160.2	
LCS 240-43925/2	Lab Control Sample	Total/NA	Water	160.2	

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

General Chemistry (Continued)

Analysis Batch: 43925 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-43925/1	Method Blank	Total/NA	Water	160.2	

Prep Batch: 44742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	1664A	
LCS 240-44742/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 240-44742/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 44746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-11156-1	WT-12607-050912-EE-001	Total/NA	Water	1664A	44742
LCS 240-44742/2-A	Lab Control Sample	Total/NA	Water	1664A	44742
MB 240-44742/1-A	Method Blank	Total/NA	Water	1664A	44742

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

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

Lab Sample ID: MB 240-43686/3-A

Matrix: Water

Analysis Batch: 43782

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43686

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.044 ug/L		05/11/12 08:48	05/11/12 20:02	1
Aroclor-1221	0.10	U	0.10	0.045 ug/L		05/11/12 08:48	05/11/12 20:02	1
Aroclor-1232	0.10	U	0.10	0.073 ug/L		05/11/12 08:48	05/11/12 20:02	1
Aroclor-1242	0.10	U	0.10	0.060 ug/L		05/11/12 08:48	05/11/12 20:02	1
Aroclor-1248	0.10	U	0.10	0.061 ug/L		05/11/12 08:48	05/11/12 20:02	1
Aroclor-1254	0.10	U	0.10	0.032 ug/L		05/11/12 08:48	05/11/12 20:02	1
Aroclor-1260	0.10	U	0.10	0.038 ug/L		05/11/12 08:48	05/11/12 20:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	121	X	10 - 114	05/11/12 08:48	05/11/12 20:02	1
Tetrachloro-m-xylene	77		15 - 131	05/11/12 08:48	05/11/12 20:02	1

Lab Sample ID: LCS 240-43686/4-A

Matrix: Water

Analysis Batch: 43782

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43686

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.44		ug/L		98	50 - 114
Aroclor-1260	2.50	2.98		ug/L		119	8 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	121	X	10 - 114
Tetrachloro-m-xylene	77		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-43717/1-A

Matrix: Water

Analysis Batch: 44019

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 43717

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		05/11/12 10:40	05/14/12 12:57	1
Nickel	0.010	U	0.010	mg/L		05/11/12 10:40	05/14/12 12:57	1
Lead	0.050	U	0.050	mg/L		05/11/12 10:40	05/14/12 12:57	1
Zinc	0.0270		0.020	mg/L		05/11/12 10:40	05/14/12 12:57	1

Lab Sample ID: LCS 240-43717/2-A

Matrix: Water

Analysis Batch: 44019

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 43717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.175		mg/L		88	85 - 115
Nickel	0.500	0.439		mg/L		88	85 - 115
Lead	0.500	0.437		mg/L		87	85 - 115
Zinc	0.500	0.429		mg/L		86	85 - 115

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

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

Lab Sample ID: 240-11156-1 MS

Matrix: Water

Analysis Batch: 44019

Client Sample ID: WT-12607-050912-EE-001

Prep Type: Total Recoverable

Prep Batch: 43717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.050	U	0.200	0.192		mg/L		91	75 - 125
Nickel	0.64		0.500	1.10		mg/L		93	75 - 125
Lead	0.050	U	0.500	0.442		mg/L		88	75 - 125
Zinc	0.020	U	0.500	0.448		mg/L		90	75 - 125

Lab Sample ID: 240-11156-1 MSD

Matrix: Water

Analysis Batch: 44019

Client Sample ID: WT-12607-050912-EE-001

Prep Type: Total Recoverable

Prep Batch: 43717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	0.050	U	0.200	0.193		mg/L		92	75 - 125	0	20
Nickel	0.64		0.500	1.11		mg/L		94	75 - 125	1	20
Lead	0.050	U	0.500	0.443		mg/L		89	75 - 125	0	20
Zinc	0.020	U	0.500	0.449		mg/L		90	75 - 125	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-43721/1-A

Matrix: Water

Analysis Batch: 44211

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43721

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.00012 mg/L		05/11/12 14:50	05/15/12 10:47	1

Lab Sample ID: LCS 240-43721/2-A

Matrix: Water

Analysis Batch: 44211

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00474		mg/L		95	85 - 115

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-43925/1

Matrix: Water

Analysis Batch: 43925

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			05/14/12 11:08	1

Lab Sample ID: LCS 240-43925/2

Matrix: Water

Analysis Batch: 43925

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	39.1	36.0		mg/L		92	73 - 113

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-44742/1-A

Matrix: Water

Analysis Batch: 44746

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44742

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	0.77 mg/L		05/21/12 10:58	05/21/12 11:45	1

Lab Sample ID: LCS 240-44742/2-A

Matrix: Water

Analysis Batch: 44746

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 44742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	34.5		mg/L		86	78 - 114

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 240-43580/3

Matrix: Water

Analysis Batch: 43580

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0050	U	0.0050	0.0020 mg/L			05/10/12 11:20	1

Lab Sample ID: LCS 240-43580/4

Matrix: Water

Analysis Batch: 43580

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.269		mg/L		108	80 - 118

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB2 (10-114)	TCX2 (15-131)
240-11156-1	WT-12607-050912-EE-001	78	67
LCS 240-43686/4-A	Lab Control Sample	121 X	77
MB 240-43686/3-A	Method Blank	121 X	77

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Client Sample ID: WT-12607-050912-EE-001

Lab Sample ID: 240-11156-1

Date Collected: 05/09/12 15:30

Matrix: Water

Date Received: 05/10/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			43686	05/11/12 08:48	CC	TAL NC
Total/NA	Analysis	608		1	43782	05/11/12 19:48	LH	TAL NC
Total Recoverable	Prep	200.7			43717	05/11/12 10:40	AS	TAL NC
Total Recoverable	Analysis	200.7 Rev 4.4		1	44019	05/14/12 13:12	NJM	TAL NC
Total/NA	Prep	245.1			43721	05/11/12 14:50	AS	TAL NC
Total/NA	Analysis	245.1		1	44211	05/15/12 11:05	AS	TAL NC
Total/NA	Analysis	SM 3500 CR D		1	43580	05/10/12 11:39	AM	TAL NC
Total/NA	Analysis	160.2		1	43925	05/14/12 11:08	JB	TAL NC
Total/NA	Prep	1664A			44742	05/21/12 10:58	JM	TAL NC
Total/NA	Analysis	1664A		1	44746	05/21/12 11:45	JM	TAL NC

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-TO1-005, RACER Livonia GWTP

TestAmerica Job ID: 240-11156-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



COC NO.: PL- 08378

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

PAGE 1 OF 1

Phone: (734) 453-5123

Fax: (734) 453-5201

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 12607-T01-005		Laboratory Name: Test America		Lab Location: N Canton, OH		SSOW ID: 12607-T01-005	
Project Name: RACER Livonia GWTP		Lab Contact: Denise Heckler		Lab Quote No:		Cooler No:	
Project Location: Livonia, MI		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier:	
Chemistry Contact: Paul Wiseman (RA)		SAMPLE TYPE		Total Containers/Sample		Airbill No:	
Sampler(s): Erik Engnell		Matrix Code		Other:		Date Shipped: 5/9/12	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yy)		TIME (hh:mm)		COMMENTS/ SPECIAL INSTRUCTIONS:	
1 WT-12607-050912-EE-001		5/9/12		1530			
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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)

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TestAmerica North Canton Sample Receipt Form/Narrative

Login # : 11156Client CRA Racer Livonia GWTP Site Name _____ By: O.C.Cooler Received on 5/10/12 Opened on 5/10/12 (Signature)FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____TestAmerica Cooler # 260-111 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# 1 (CF -2°C) Observed Sample Temp. 5.7 °C Corrected Sample Temp. 3.7 °C

IR GUN# 4G (CF -1°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

IR GUN# 5G (CF -1°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

IR GUN# 6Y (CF -2°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

☐ Multiple
on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____

Yes No

-Were custody seals on the outside of the cooler(s) signed & dated?

Yes No NA

-Were custody seals on the bottle(s)?

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

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

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)

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Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-11156-1

Login Number: 11156

List Source: TestAmerica Canton

List Number: 1

Creator: Maddux, Ann

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	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: 240-13710-1

Client Project/Site: 12607-T01, RACER Livonia

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Mr. Paul Wiseman



Authorized for release by:

8/15/2012 9:49:11 AM

Denise Heckler

Project Manager II

denise.heckler@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Job ID: 240-13710-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12607-T01, RACER Livonia

Report Number: 240-13710-1

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 North 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 08/01/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.6 C.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample WT-12607-073112-EE-001 (240-13710-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 08/09/2012 and analyzed on 08/10/2012.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample WT-12607-073112-EE-001 (240-13710-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 08/06/2012 and analyzed on 08/09/2012 and 08/13/2012.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Job ID: 240-13710-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

MERCURY

Sample WT-12607-073112-EE-001 (240-13710-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 08/10/2012 and analyzed on 08/13/2012.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Sample WT-12607-073112-EE-001 (240-13710-1) was analyzed for total suspended solids in accordance with EPA Method 160.2. The samples were analyzed on 08/02/2012.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

HEM

Sample WT-12607-073112-EE-001 (240-13710-1) was analyzed for HEM in accordance with EPA Method 1664A. The samples were prepared and analyzed on 08/09/2012.

No difficulties were encountered during the HEM analysis.

All quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Sample WT-12607-073112-EE-001 (240-13710-1) was analyzed for hexavalent chromium in accordance with SM 3500 CR D. The samples were analyzed on 08/01/2012.

Cr (VI) was detected in method blank MB 240-52908/3 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 "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the hexavalent chromium analysis.

All other quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Qualifiers

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
B	Compound was found in the blank and sample.
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.

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
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-13710-1	WT-12607-073112-EE-001	Water	07/31/12 17:00	08/01/12 08:30

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Client Sample ID: WT-12607-073112-EE-001

Lab Sample ID: 240-13710-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.20		0.050	mg/L	1		200.7 Rev 4.4	Total
Nickel	0.21		0.010	mg/L	1		200.7 Rev 4.4	Recoverable
Cr (VI)	0.018	B	0.0050	0.0020 mg/L	1		SM 3500 CR D	Total
								Recoverable
								Total/NA

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Method	Method Description	Protocol	Laboratory
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL NC
200.7 Rev 4.4	Metals (ICP)	EPA	TAL NC
245.1	Mercury (CVAA)	EPA	TAL NC
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL NC
1664A	HEM and SGT-HEM	1664A	TAL NC
SM 3500 CR D	Chromium, Hexavalent	SM	TAL NC

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

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

Client Sample ID: WT-12607-073112-EE-001

Lab Sample ID: 240-13710-1

Date Collected: 07/31/12 17:00

Matrix: Water

Date Received: 08/01/12 08:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1
Aroclor-1221	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1
Aroclor-1232	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1
Aroclor-1242	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1
Aroclor-1248	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1
Aroclor-1254	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1
Aroclor-1260	0.095	U	0.095	ug/L		08/09/12 12:18	08/10/12 08:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	45		10 - 114	08/09/12 12:18	08/10/12 08:32	1
Tetrachloro-m-xylene	79		15 - 131	08/09/12 12:18	08/10/12 08:32	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

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

Client Sample ID: WT-12607-073112-EE-001

Date Collected: 07/31/12 17:00

Date Received: 08/01/12 08:30

Lab Sample ID: 240-13710-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.20		0.050	mg/L		08/06/12 14:17	08/13/12 12:21	1
Nickel	0.21		0.010	mg/L		08/06/12 14:17	08/09/12 19:00	1
Lead	0.050	U	0.050	mg/L		08/06/12 14:17	08/09/12 19:00	1
Zinc	0.020	U	0.020	mg/L		08/06/12 14:17	08/09/12 19:00	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: WT-12607-073112-EE-001

Date Collected: 07/31/12 17:00

Date Received: 08/01/12 08:30

Lab Sample ID: 240-13710-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		08/10/12 14:00	08/13/12 15:33	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

General Chemistry

Client Sample ID: WT-12607-073112-EE-001

Date Collected: 07/31/12 17:00

Date Received: 08/01/12 08:30

Lab Sample ID: 240-13710-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			08/02/12 10:43	1
HEM	4.7	U	4.7	mg/L		08/09/12 08:56	08/09/12 14:45	1
Cr (VI)	0.018	B	0.0050	0.0020 mg/L			08/01/12 16:32	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

GC Semi VOA

Prep Batch: 53880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	3510C	
LCS 240-53880/5-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-53880/4-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 53958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	608	53880
LCS 240-53880/5-A	Lab Control Sample	Total/NA	Water	608	53880
MB 240-53880/4-A	Method Blank	Total/NA	Water	608	53880

Metals

Prep Batch: 53391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total Recoverable	Water	200.7	
240-13710-1 MS	WT-12607-073112-EE-001	Total Recoverable	Water	200.7	
240-13710-1 MSD	WT-12607-073112-EE-001	Total Recoverable	Water	200.7	
LCS 240-53391/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-53389/1-B	Method Blank	Total Recoverable	Water	200.7	

Prep Batch: 53959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	245.1	
240-13710-1 MS	WT-12607-073112-EE-001	Total/NA	Water	245.1	
240-13710-1 MSD	WT-12607-073112-EE-001	Total/NA	Water	245.1	
LCS 240-53959/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-53959/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 53978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total Recoverable	Water	200.7 Rev 4.4	53391
240-13710-1 MS	WT-12607-073112-EE-001	Total Recoverable	Water	200.7 Rev 4.4	53391
240-13710-1 MSD	WT-12607-073112-EE-001	Total Recoverable	Water	200.7 Rev 4.4	53391
LCS 240-53391/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	53391
MB 240-53389/1-B	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	53391

Analysis Batch: 54337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total Recoverable	Water	200.7 Rev 4.4	53391
240-13710-1 MS	WT-12607-073112-EE-001	Total Recoverable	Water	200.7 Rev 4.4	53391
240-13710-1 MSD	WT-12607-073112-EE-001	Total Recoverable	Water	200.7 Rev 4.4	53391
LCS 240-53391/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	53391
MB 240-53389/1-B	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	53391

Analysis Batch: 54359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	245.1	53959
240-13710-1 MS	WT-12607-073112-EE-001	Total/NA	Water	245.1	53959
240-13710-1 MSD	WT-12607-073112-EE-001	Total/NA	Water	245.1	53959
LCS 240-53959/2-A	Lab Control Sample	Total/NA	Water	245.1	53959
MB 240-53959/1-A	Method Blank	Total/NA	Water	245.1	53959

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

General Chemistry

Analysis Batch: 52908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	SM 3500 CR D	
240-13710-1 MS	WT-12607-073112-EE-001	Total/NA	Water	SM 3500 CR D	
240-13710-1 MSD	WT-12607-073112-EE-001	Total/NA	Water	SM 3500 CR D	
LCS 240-52908/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 240-52908/3	Method Blank	Total/NA	Water	SM 3500 CR D	

Analysis Batch: 52971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	160.2	
LCS 240-52971/2	Lab Control Sample	Total/NA	Water	160.2	
MB 240-52971/1	Method Blank	Total/NA	Water	160.2	

Prep Batch: 53816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	1664A	
LCS 240-53816/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 240-53816/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 53845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-13710-1	WT-12607-073112-EE-001	Total/NA	Water	1664A	53816
LCS 240-53816/2-A	Lab Control Sample	Total/NA	Water	1664A	53816
MB 240-53816/1-A	Method Blank	Total/NA	Water	1664A	53816

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

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

Lab Sample ID: MB 240-53880/4-A

Matrix: Water

Analysis Batch: 53958

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53880

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1
Aroclor-1221	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1
Aroclor-1232	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1
Aroclor-1242	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1
Aroclor-1248	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1
Aroclor-1254	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1
Aroclor-1260	0.10	U	0.10	ug/L		08/09/12 12:18	08/10/12 09:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	65		10 - 114	08/09/12 12:18	08/10/12 09:20	1
Tetrachloro-m-xylene	67		15 - 131	08/09/12 12:18	08/10/12 09:20	1

Lab Sample ID: LCS 240-53880/5-A

Matrix: Water

Analysis Batch: 53958

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53880

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.21		ug/L		88	50 - 114
Aroclor-1260	2.50	2.09		ug/L		83	8 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	69		10 - 114
Tetrachloro-m-xylene	77		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-53389/1-B

Matrix: Water

Analysis Batch: 53978

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	0.010	U	0.010	mg/L		08/06/12 14:17	08/09/12 18:53	1
Lead	0.050	U	0.050	mg/L		08/06/12 14:17	08/09/12 18:53	1
Zinc	0.020	U	0.020	mg/L		08/06/12 14:17	08/09/12 18:53	1

Lab Sample ID: MB 240-53389/1-B

Matrix: Water

Analysis Batch: 54337

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		08/06/12 14:17	08/13/12 12:10	1

Lab Sample ID: LCS 240-53391/2-A

Matrix: Water

Analysis Batch: 53978

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nickel	0.500	0.472		mg/L		94	85 - 115
Lead	0.500	0.467		mg/L		93	85 - 115

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

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

Lab Sample ID: LCS 240-53391/2-A

Matrix: Water

Analysis Batch: 53978

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.500	0.476		mg/L		95	85 - 115

Lab Sample ID: LCS 240-53391/2-A

Matrix: Water

Analysis Batch: 54337

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.194		mg/L		97	85 - 115

Lab Sample ID: 240-13710-1 MS

Matrix: Water

Analysis Batch: 53978

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nickel	0.21		0.500	0.664		mg/L		91	75 - 125
Lead	0.050	U	0.500	0.469		mg/L		94	75 - 125
Zinc	0.020	U	0.500	0.459		mg/L		92	75 - 125

Lab Sample ID: 240-13710-1 MS

Matrix: Water

Analysis Batch: 54337

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.20		0.200	0.412		mg/L		106	75 - 125

Lab Sample ID: 240-13710-1 MSD

Matrix: Water

Analysis Batch: 53978

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Nickel	0.21		0.500	0.713		mg/L		101	75 - 125	7	20
Lead	0.050	U	0.500	0.494		mg/L		99	75 - 125	5	20
Zinc	0.020	U	0.500	0.495		mg/L		99	75 - 125	8	20

Lab Sample ID: 240-13710-1 MSD

Matrix: Water

Analysis Batch: 54337

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total Recoverable

Prep Batch: 53391

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chromium	0.20		0.200	0.401		mg/L		101	75 - 125	3	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-53959/1-A

Matrix: Water

Analysis Batch: 54359

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53959

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		08/10/12 14:00	08/13/12 15:30	1

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-53959/2-A

Matrix: Water

Analysis Batch: 54359

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00531		mg/L		106	85 - 115

Lab Sample ID: 240-13710-1 MS

Matrix: Water

Analysis Batch: 54359

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total/NA

Prep Batch: 53959

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00020	U	0.00100	0.000980		mg/L		98	70 - 130

Lab Sample ID: 240-13710-1 MSD

Matrix: Water

Analysis Batch: 54359

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total/NA

Prep Batch: 53959

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00020	U	0.00100	0.00101		mg/L		101	70 - 130	3	20

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-52971/1

Matrix: Water

Analysis Batch: 52971

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			08/02/12 10:43	1

Lab Sample ID: LCS 240-52971/2

Matrix: Water

Analysis Batch: 52971

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	52.1	47.0		mg/L		90	73 - 113

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-53816/1-A

Matrix: Water

Analysis Batch: 53845

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53816

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L		08/09/12 08:56	08/09/12 11:45	1

Lab Sample ID: LCS 240-53816/2-A

Matrix: Water

Analysis Batch: 53845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53816

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	32.4		mg/L		81	78 - 114

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 240-52908/3

Matrix: Water

Analysis Batch: 52908

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.00314	J	0.0050	0.0020 mg/L			08/01/12 16:28	1

Lab Sample ID: LCS 240-52908/4

Matrix: Water

Analysis Batch: 52908

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.269		mg/L		108	80 - 118

Lab Sample ID: 240-13710-1 MS

Matrix: Water

Analysis Batch: 52908

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.018	B	0.250	0.291		mg/L		109	41 - 136

Lab Sample ID: 240-13710-1 MSD

Matrix: Water

Analysis Batch: 52908

Client Sample ID: WT-12607-073112-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	0.018	B	0.250	0.286		mg/L		107	41 - 136	2	20

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB2 (10-114)	TCX2 (15-131)
240-13710-1	WT-12607-073112-EE-001	45	79
LCS 240-53880/5-A	Lab Control Sample	69	77
MB 240-53880/4-A	Method Blank	65	67

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

Client Sample ID: WT-12607-073112-EE-001

Lab Sample ID: 240-13710-1

Date Collected: 07/31/12 17:00

Matrix: Water

Date Received: 08/01/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			53880	08/09/12 12:18	SE	TAL NC
Total/NA	Analysis	608		1	53958	08/10/12 08:32	LH	TAL NC
Total Recoverable	Prep	200.7			53391	08/06/12 14:17	SG	TAL NC
Total Recoverable	Analysis	200.7 Rev 4.4		1	53978	08/09/12 19:00	SG	TAL NC
Total Recoverable	Analysis	200.7 Rev 4.4		1	54337	08/13/12 12:21	KC	TAL NC
Total/NA	Prep	245.1			53959	08/10/12 14:00	LM	TAL NC
Total/NA	Analysis	245.1		1	54359	08/13/12 15:33	DH	TAL NC
Total/NA	Analysis	SM 3500 CR D		1	52908	08/01/12 16:32	JM	TAL NC
Total/NA	Analysis	160.2		1	52971	08/02/12 10:43	JB	TAL NC
Total/NA	Prep	1664A			53816	08/09/12 08:56	AM	TAL NC
Total/NA	Analysis	1664A		1	53845	08/09/12 14:45	AM	TAL NC

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia

TestAmerica Job ID: 240-13710-1

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	NELAC	9	01144CA	06-30-13
Connecticut	State Program	1	PH-0590	12-31-13
Florida	NELAC	4	E87225	06-30-13
Georgia	State Program	4	N/A	06-30-13
Illinois	NELAC	5	200004	07-31-13
Kansas	NELAC	7	E-10336	01-31-13
Kentucky	State Program	4	58	11-16-12
L-A-B	DoD ELAP		L2315	02-28-13
Minnesota	NELAC	5	039-999-348	12-31-12
Nevada	State Program	9	OH-000482008A	07-31-12
New Jersey	NELAC	2	OH001	06-30-13
New York	NELAC	2	10975	04-01-13
Ohio VAP	State Program	5	CL0024	01-19-14
Pennsylvania	NELAC	3	68-00340	08-31-12
USDA	Federal		P330-11-00328	08-26-14
Virginia	NELAC	3	460175	09-14-12
Washington	State Program	10	C971	01-12-13
West Virginia DEP	State Program	3	210	12-31-12
Wisconsin	State Program	5	999518190	08-31-12



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-08976

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/Phase/Task Code: 12607-T01-C05		Laboratory Name: Test America		Lab Location: N Center, OH		SSOW ID: 12607-T01-C05	
Project Name: RACER Livonia GWRP		Lab Contact: Denise Hecker		Lab Quote No:		Cooler No:	
Project Location: Livonia, MI		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)			
Chemistry Contact: Paul Wiseman (CRA)		SAMPLE TYPE					
Sampler(s): Erik Engnell		Matrix Code					
SAMPLE IDENTIFICATION (Containers for each sample must be completed on one title)		DATE (mm/dd/yyyy)		TIME (hh:mm)			
1 WT-12607-073112-EE-001		7/31/12		1700			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
Total Number of Containers: 7		Notes/ Special Requirements:					
All Samples in Cooler must be on COC		RECEIVED BY		COMPANY		DATE	
1 Erik Engnell		CRA		7/31/12		1730	
2						8/1/12-0830	
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 (201/0804)

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15

TestAmerica North Canton Sample Receipt Form/Narrative

Login # : 13710

Client CRA Site Name Racer Livonia By: Denny Burns
Cooler Received on 8/1/12 Opened on 8/1/12 (Signature)
FedEx: 1st Grd. ☒ Exp ☐ UPS ☐ FAS ☐ Stetson Client Drop Off ☐ TestAmerica Courier ☐ Other ☐
TestAmerica Cooler # 260-021 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# 1 (CF 0°C) Observed Sample Temp. 4.6 °C Corrected Sample Temp. 4.6 °C
IR GUN# 4G (CF -1°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C
IR GUN# 5G (CF -1°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C
IR GUN# 8 (CF 0°C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

☐ Multiple
on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____

Yes ☒ No ☐

-Were custody seals on the outside of the cooler(s) signed & dated?

Yes ☐ No ☒ NA

-Were custody seals on the bottle(s)?

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

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

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)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client ID	pH	Date	Initials
EE-001	12, 12, 12	8/1/12	TB

[illegible]

Coolant

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-13710-1

Login Number: 13710

List Source: TestAmerica Canton

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	REFER TO COOLER RECEIPT FORM
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	N/A	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	N/A	
Samples are received within Holding Time.	N/A	
Sample containers have legible labels.	N/A	
Containers are not broken or leaking.	N/A	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
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: 240-14211-1

Client Project/Site: 12607-T01, RACER Livonia/Eckles Rd

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Mr. Paul Wiseman



Authorized for release by:

8/29/2012 9:59:11 AM

Denise Heckler

Project Manager II

denise.heckler@testamericainc.com

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

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

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Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Job ID: 240-14211-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 12607-T01, RACER Livonia/Eckles Rd

Report Number: 240-14211-1

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 North 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 08/16/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.2 C.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample WT-12607-081512-EE-001 (240-14211-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 08/22/2012 and analyzed on 08/23/2012.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample WT-12607-081512-EE-001 (240-14211-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 08/23/2012 and analyzed on 08/24/2012.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Job ID: 240-14211-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

MERCURY

Sample WT-12607-081512-EE-001 (240-14211-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 08/17/2012 and analyzed on 08/18/2012.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Sample WT-12607-081512-EE-001 (240-14211-1) was analyzed for total suspended solids in accordance with EPA Method 160.2. The samples were analyzed on 08/17/2012.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

HEM

Sample WT-12607-081512-EE-001 (240-14211-1) was analyzed for HEM in accordance with EPA Method 1664A. The samples were prepared and analyzed on 08/23/2012.

No difficulties were encountered during the HEM analysis.

All other quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Sample WT-12607-081512-EE-001 (240-14211-1) was analyzed for hexavalent chromium in accordance with SM 3500 CR D. The samples were analyzed on 08/16/2012.

No difficulties were encountered during the hexavalent chromium analysis.

All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Qualifiers

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.

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
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-14211-1	WT-12607-081512-EE-001	Water	08/15/12 17:00	08/16/12 09:15

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Client Sample ID: WT-12607-081512-EE-001

Lab Sample ID: 240-14211-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.068		0.050	mg/L	1		200.7 Rev 4.4	Total
Nickel	0.056		0.010	mg/L	1		200.7 Rev 4.4	Recoverable Total
Cr (VI)	0.022		0.0050	mg/L	1		SM 3500 CR D	Recoverable Total/NA

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Method	Method Description	Protocol	Laboratory
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL NC
200.7 Rev 4.4	Metals (ICP)	EPA	TAL NC
245.1	Mercury (CVAA)	EPA	TAL NC
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL NC
1664A	HEM and SGT-HEM	1664A	TAL NC
SM 3500 CR D	Chromium, Hexavalent	SM	TAL NC

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

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

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

Client Sample ID: WT-12607-081512-EE-001

Date Collected: 08/15/12 17:00

Date Received: 08/16/12 09:15

Lab Sample ID: 240-14211-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Aroclor-1221	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Aroclor-1232	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Aroclor-1242	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Aroclor-1248	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Aroclor-1254	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Aroclor-1260	0.095	U	0.095	ug/L		08/22/12 12:54	08/23/12 07:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	55		10 - 114			08/22/12 12:54	08/23/12 07:46	1
Tetrachloro-m-xylene	84		15 - 131			08/22/12 12:54	08/23/12 07:46	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

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

Client Sample ID: WT-12607-081512-EE-001

Date Collected: 08/15/12 17:00

Date Received: 08/16/12 09:15

Lab Sample ID: 240-14211-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.068		0.050	mg/L		08/23/12 08:34	08/24/12 15:54	1
Nickel	0.056		0.010	mg/L		08/23/12 08:34	08/24/12 15:54	1
Lead	0.050	U	0.050	mg/L		08/23/12 08:34	08/24/12 15:54	1
Zinc	0.020	U	0.020	mg/L		08/23/12 08:34	08/24/12 15:54	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: WT-12607-081512-EE-001

Date Collected: 08/15/12 17:00

Date Received: 08/16/12 09:15

Lab Sample ID: 240-14211-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		08/17/12 12:35	08/18/12 11:29	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

General Chemistry

Client Sample ID: WT-12607-081512-EE-001

Date Collected: 08/15/12 17:00

Date Received: 08/16/12 09:15

Lab Sample ID: 240-14211-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			08/17/12 09:21	1
HEM	4.8	U	4.8	mg/L		08/23/12 08:37	08/23/12 14:13	1
Cr (VI)	0.022		0.0050	mg/L			08/16/12 11:08	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

GC Semi VOA

Prep Batch: 55343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	3510C	
LCS 240-55343/4-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-55343/3-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 55398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	608	55343
LCS 240-55343/4-A	Lab Control Sample	Total/NA	Water	608	55343
MB 240-55343/3-A	Method Blank	Total/NA	Water	608	55343

Metals

Prep Batch: 54766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	245.1	
LCS 240-54766/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-54766/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 54930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	245.1	54766

Analysis Batch: 54958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-54766/2-A	Lab Control Sample	Total/NA	Water	245.1	54766
MB 240-54766/1-A	Method Blank	Total/NA	Water	245.1	54766

Prep Batch: 55245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total Recoverable	Water	200.7	
240-14211-1 MS	WT-12607-081512-EE-001	Total Recoverable	Water	200.7	
240-14211-1 MSD	WT-12607-081512-EE-001	Total Recoverable	Water	200.7	
LCS 240-55245/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-55245/1-A	Method Blank	Total Recoverable	Water	200.7	

Analysis Batch: 55716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total Recoverable	Water	200.7 Rev 4.4	55245
240-14211-1 MS	WT-12607-081512-EE-001	Total Recoverable	Water	200.7 Rev 4.4	55245
240-14211-1 MSD	WT-12607-081512-EE-001	Total Recoverable	Water	200.7 Rev 4.4	55245
LCS 240-55245/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	55245
MB 240-55245/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	55245

General Chemistry

Analysis Batch: 54638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	SM 3500 CR D	
240-14211-1 MS	WT-12607-081512-EE-001	Total/NA	Water	SM 3500 CR D	
240-14211-1 MSD	WT-12607-081512-EE-001	Total/NA	Water	SM 3500 CR D	
LCS 240-54638/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 240-54638/3	Method Blank	Total/NA	Water	SM 3500 CR D	

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

General Chemistry (Continued)

Analysis Batch: 54767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	160.2	
LCS 240-54767/2	Lab Control Sample	Total/NA	Water	160.2	
MB 240-54767/1	Method Blank	Total/NA	Water	160.2	

Prep Batch: 55414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	1664A	
LCS 240-55414/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 240-55414/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 55452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14211-1	WT-12607-081512-EE-001	Total/NA	Water	1664A	55414
LCS 240-55414/2-A	Lab Control Sample	Total/NA	Water	1664A	55414
MB 240-55414/1-A	Method Blank	Total/NA	Water	1664A	55414

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

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

Lab Sample ID: MB 240-55343/3-A

Matrix: Water

Analysis Batch: 55398

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 55343

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1
Aroclor-1221	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1
Aroclor-1232	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1
Aroclor-1242	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1
Aroclor-1248	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1
Aroclor-1254	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1
Aroclor-1260	0.10	U	0.10	ug/L		08/22/12 12:54	08/23/12 08:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 114	08/22/12 12:54	08/23/12 08:13	1
Tetrachloro-m-xylene	84		15 - 131	08/22/12 12:54	08/23/12 08:13	1

Lab Sample ID: LCS 240-55343/4-A

Matrix: Water

Analysis Batch: 55398

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 55343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.24		ug/L		90	50 - 114
Aroclor-1260	2.50	2.37		ug/L		95	8 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	84		10 - 114
Tetrachloro-m-xylene	76		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-55245/1-A

Matrix: Water

Analysis Batch: 55716

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 55245

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		08/23/12 08:34	08/24/12 15:43	1
Nickel	0.010	U	0.010	mg/L		08/23/12 08:34	08/24/12 15:43	1
Lead	0.050	U	0.050	mg/L		08/23/12 08:34	08/24/12 15:43	1
Zinc	0.020	U	0.020	mg/L		08/23/12 08:34	08/24/12 15:43	1

Lab Sample ID: LCS 240-55245/2-A

Matrix: Water

Analysis Batch: 55716

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 55245

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.194		mg/L		97	85 - 115
Nickel	0.500	0.513		mg/L		103	85 - 115
Lead	0.500	0.487		mg/L		97	85 - 115
Zinc	0.500	0.513		mg/L		103	85 - 115

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

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

Lab Sample ID: 240-14211-1 MS

Matrix: Water

Analysis Batch: 55716

Client Sample ID: WT-12607-081512-EE-001

Prep Type: Total Recoverable

Prep Batch: 55245

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.068		0.200	0.280		mg/L		106	75 - 125
Nickel	0.056		0.500	0.596		mg/L		108	75 - 125
Lead	0.050	U	0.500	0.516		mg/L		103	75 - 125
Zinc	0.020	U	0.500	0.548		mg/L		108	75 - 125

Lab Sample ID: 240-14211-1 MSD

Matrix: Water

Analysis Batch: 55716

Client Sample ID: WT-12607-081512-EE-001

Prep Type: Total Recoverable

Prep Batch: 55245

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	0.068		0.200	0.264		mg/L		98	75 - 125	6	20
Nickel	0.056		0.500	0.565		mg/L		102	75 - 125	5	20
Lead	0.050	U	0.500	0.486		mg/L		97	75 - 125	6	20
Zinc	0.020	U	0.500	0.517		mg/L		102	75 - 125	6	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-54766/1-A

Matrix: Water

Analysis Batch: 54958

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 54766

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		08/17/12 12:35	08/18/12 09:18	1

Lab Sample ID: LCS 240-54766/2-A

Matrix: Water

Analysis Batch: 54958

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 54766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00543		mg/L		109	85 - 115

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-54767/1

Matrix: Water

Analysis Batch: 54767

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			08/17/12 09:21	1

Lab Sample ID: LCS 240-54767/2

Matrix: Water

Analysis Batch: 54767

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	52.1	48.0		mg/L		92	73 - 113

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-55414/1-A

Matrix: Water

Analysis Batch: 55452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 55414

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L		08/23/12 08:37	08/23/12 10:26	1

Lab Sample ID: LCS 240-55414/2-A

Matrix: Water

Analysis Batch: 55452

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 55414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	33.5		mg/L		84	78 - 114

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 240-54638/3

Matrix: Water

Analysis Batch: 54638

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0050	U	0.0050	mg/L			08/16/12 11:08	1

Lab Sample ID: LCS 240-54638/4

Matrix: Water

Analysis Batch: 54638

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.252		mg/L		101	80 - 118

Lab Sample ID: 240-14211-1 MS

Matrix: Water

Analysis Batch: 54638

Client Sample ID: WT-12607-081512-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.022		0.250	0.166		mg/L		58	41 - 136

Lab Sample ID: 240-14211-1 MSD

Matrix: Water

Analysis Batch: 54638

Client Sample ID: WT-12607-081512-EE-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD Limit
Cr (VI)	0.022		0.250	0.159		mg/L		55	41 - 136	5 20

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB2 (10-114)	TCX2 (15-131)
240-14211-1	WT-12607-081512-EE-001	55	84
LCS 240-55343/4-A	Lab Control Sample	84	76
MB 240-55343/3-A	Method Blank	79	84
Surrogate Legend			
DCB = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

Client Sample ID: WT-12607-081512-EE-001

Lab Sample ID: 240-14211-1

Date Collected: 08/15/12 17:00

Matrix: Water

Date Received: 08/16/12 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			55343	08/22/12 12:54	BM	TAL NC
Total/NA	Analysis	608		1	55398	08/23/12 07:46	LH	TAL NC
Total/NA	Prep	245.1			54766	08/17/12 12:35	LM	TAL NC
Total/NA	Analysis	245.1		1	54930	08/18/12 11:29	DH	TAL NC
Total Recoverable	Prep	200.7			55245	08/23/12 08:34	LM	TAL NC
Total Recoverable	Analysis	200.7 Rev 4.4		1	55716	08/24/12 15:54	KC	TAL NC
Total/NA	Analysis	SM 3500 CR D		1	54638	08/16/12 11:08	JM	TAL NC
Total/NA	Analysis	160.2		1	54767	08/17/12 09:21	LG	TAL NC
Total/NA	Prep	1664A			55414	08/23/12 08:37	BW	TAL NC
Total/NA	Analysis	1664A		1	55452	08/23/12 14:13	BW	TAL NC

Laboratory References:

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 12607-T01, RACER Livonia/Eckles Rd

TestAmerica Job ID: 240-14211-1

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	NELAC	9	01144CA	06-30-13
Connecticut	State Program	1	PH-0590	12-31-13
Florida	NELAC	4	E87225	06-30-13
Georgia	State Program	4	N/A	06-30-13
Illinois	NELAC	5	200004	07-31-13
Kansas	NELAC	7	E-10336	01-31-13
Kentucky	State Program	4	58	11-16-12
L-A-B	DoD ELAP		L2315	02-28-13
Minnesota	NELAC	5	039-999-348	12-31-12
Nevada	State Program	9	OH-000482008A	07-31-12
New Jersey	NELAC	2	OH001	06-30-13
New York	NELAC	2	10975	04-01-13
Ohio VAP	State Program	5	CL0024	01-19-14
Pennsylvania	NELAC	3	68-00340	08-31-12
USDA	Federal		P330-11-00328	08-26-14
Virginia	NELAC	3	460175	09-14-12
Washington	State Program	10	C971	01-12-13
West Virginia DEP	State Program	3	210	12-31-12
Wisconsin	State Program	5	999518190	08-31-12

Project No/ Phase/Task Code: 12607-T01-005		Laboratory Name: Test America		Lab Location: N Canton, OH		SSOW ID: 12607-T01-005	
Project Name: RACER Livonia GWP		Lab Contact: Denise Heckler		Lab Quote No:		Cooler No:	
Project Location: Livonia, MI		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier:	
Chemistry Contact: Paul Wiseman (CPA)						Airbill No:	
Sampler(s): Erik Engnell		SAMPLE TYPE		Total Containers/Sample		Date Shipped: 8/15/12	
WT-12607-CE1512-EE-001		Matrix Code		7		COMMENTS/SPECIAL INSTRUCTIONS:	
DATE TIME		DATE TIME		DATE TIME		DATE TIME	
8/15/12 1700		8/15/12 1700		8/15/12 1700		8/15/12 1700	
1		1		1		1	
2		2		2		2	
3		3		3		3	
4		4		4		4	
5		5		5		5	
6		6		6		6	
7		7		7		7	
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80		80		80		80	
81		81		81		81	
82		82		82		82	
83							

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 North Canton Sample Receipt Form/Narrative

Login # : 14211

Client CRA Site Name Racer Livonia By: Derry Burns
Cooler Received on 8/16/12 Opened on 8/16/12 (Signature)
FedEx: 1st Grd ☒ UPS ☐ FAS ☐ Stetson Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # Valpa 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# 1	(CF 0°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp. <u>2.2</u> °C	Corrected Sample Temp. <u>1.2</u> °C	<input type="checkbox"/> Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 8	(CF 0°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes ☒ No ☒
-Were custody seals on the outside of the cooler(s) signed & dated? Yes ☐ No ☒ NA ☒
-Were custody seals on the bottle(s)? 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
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

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)

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Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 240-14211-1

Login Number: 14211

List Source: TestAmerica Canton

List Number: 1

Creator: Maddux, Ann

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	REFER TO COOLER RECEIPT FORM
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	N/A	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	N/A	
Samples are received within Holding Time.	N/A	
Sample containers have legible labels.	N/A	
Containers are not broken or leaking.	N/A	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	