

December 24, 2014
File No. 21.0056546.00

Mr. Glenn May
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Division of Environmental Remediation
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Buffalo, New York 14203



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Re: Results of May 2014 Groundwater Sampling
BCP Site # C932138
GM Components Holdings, LLC
200 Upper Mountain Road
Lockport, NY 14094

Dear Glenn:

On behalf of GM Components Holdings LLC (GMCH), GZA GeoEnvironmental of New York (GZA) has prepared this letter report to summarize the results of the May 2014 groundwater sampling event conducted at Brownfield Cleanup Program (BCP) Site (C932140) at the GMCH facility located at 200 Upper Mountain Road in Lockport, New York. The groundwater sampling event was conducted from May 14th through June 3rd, 2014 and included a total of 25 monitoring wells (see Figure 1). Eleven wells are associated with the Building 7 site (MW-7-1, 7-2, 7-3, 7-4, 7-5, 7-6, 7-7, 7-8, 7-A-6, 7-C-2, and 7-P-1). Eight wells are associated with the Building 8 site (MW-6-1, 6-2, 6-F-8, 8-1, 8-1, 8-3, 8-4, and 8-003-B) and six are associated with the Building 10 site (MW-10-1, 10-2, 10-3, 9-101-A, 9-12, and TK-6). Groundwater elevation data was also collected during the sampling event. Figure 2 depicts the groundwater contour map generated from water level measurements collected on May 15, 2014.

The groundwater contours generated from the measurements collected in May 2014 generally indicate an easterly flow direction across the GMCH facility, consistent with previous sampling rounds, as shown on Figures 2. We note there appears to be a slight mounding of the groundwater table near the southeastern corner of Building 8, based on the measurements collected at MW-7. This mounding may be due to a leaking fire suppression line riser pipe which was repaired on September 9, 2013. The leak was located about 40 feet east of MW-7. Groundwater table elevations will be collected during future site-wide groundwater assessments to monitor and assess the groundwater elevations at this location and Site-wide.



BACKGROUND

GMCH entered into three Brownfield Cleanup Agreements (BCAs) with the New York State Department of Environmental Conservation (NYSDEC) which were executed in May 2010. A BCP Remedial Investigation (RI) was conducted at Buildings 7, 8 and 10 BCP Sites from December 2010 through spring 2011, in accordance with the NYSDEC approved RI Work Plans for the three sites. This was the first time the 25 monitoring wells were sampled as part of one sampling event. The BCP Remedial Investigation Reports (RIRs; Haley & Aldrich/GZA, November 2011) for Buildings 7, 8 and 10 were approved by NYSDEC in letters dated November 29, 2011.

GMCH has been voluntarily collecting groundwater samples from the three BCP Sites annually since the BCP RI was completed. Groundwater samples were collected and analyzed for compounds of concern (COCs)¹ and monitored natural attenuation (MNA) parameters as identified in the Delphi Harrison Thermal Systems Site (Registry Site #932113, referred to as the “Delphi Site”), Site Management Plan² (SMP). This SMP was developed to provide annual sampling and reporting requirements for the Delphi Site located in the eastern portion of the GMCH facility and downgradient of Building 7, 8 and 10. This SMP was approved by NYSDEC in a letter dated October 13, 2011 and was the basis for developing the groundwater monitoring protocol for the three BCP Sites.

The BCP Site for Building 7 (BCP Site #C932138) was consolidated with former BCP Sites C932139 (Building 8) and C932140 (Building 10) under BCP Site C932138. BCP agreements for Sites C932139 C932140 have been withdrawn from the BCP. BCP Site consolidation of the three individual sites into one BCP Site was approved by the NYSDEC in June of 2014.

GROUNDWATER MONITORING & SAMPLING

The May 2014 groundwater monitoring and sampling event was conducted with the sampling techniques consistent with those described in the Delphi Site SMP and BCP RI Work Plans. The analytical parameters utilized were consistent with those described in the Delphi Site SMP. The sampling event, including a total of 25 monitoring wells, was conducted from May 14th through June 3rd, 2014. In addition to the MNA parameters identified in the SMP, carbon dioxide (CO₂), ethane, and ethene were included in the parameter list for this sampling event. These parameters were added to assist with the evaluation of the total organic carbon (TOC) fate and transport within the formation.

¹ The five COCs are trichloroethylene, tetrachloroethylene, *cis*-1,2-dichloroethene, *trans*-1,2-dichloroethylene, and vinyl chloride.

² “Delphi Harrison Thermal Systems Site, Niagara County, New York, Site Management Plan, NYSDEC Site Number 9-32-113” dated October, 2011. Prepared for GM Components Holdings, LLC by GZA.



METHODOLOGY

The groundwater monitoring and sampling was performed using low-flow sampling techniques with a peristaltic pump, disposable polyethylene tubing and a water quality meter with a flow-through cell to collect water quality field parameters.

The following is the list of the analytical parameters for this sampling event:

Field Measured Parameters: temperature, specific conductance, pH, turbidity, dissolved oxygen (DO) and oxidation reduction potential (ORP).

Compounds of Concerns: tetrachloroethylene (PCE), trichloroethylene (TCE), *cis*-1,2-dichloroethylene (*cis*-DCE), *trans*-1,2-dichloroethylene (*trans*-DCE) and vinyl chloride (VC).

Natural Attenuation Parameters: methane, iron, magnesium, manganese, ammonia, alkalinity, total organic carbon (TOC), chloride, nitrate, nitrite, sulfate, sulfide, carbon dioxide, ethane, and ethene.

Groundwater pumping rates used during monitoring/sampling varied at the monitoring locations in order to establish a relatively stable water level. Once a stable water level was established within the monitoring well, flow rates were maintained during the monitoring/sampling period. Samples were collected for analysis after field-measured parameters stabilized, and a minimum of one well volume was purged.

It should be noted that a stable water level could not be established at two monitoring well locations (MW-7-4, and 7-8). These locations were purged to dry-like conditions and allowed to recharge until the water level recovered to at least 85% of the initial water level prior to sample collection.

Table 1 is a summary of the analytical sample results. The Monitoring Well Observations & Groundwater Sampling Logs are included in Appendix A. A summary of the previous sampling event results of the COCs are included in Appendix B. The TestAmerica Laboratories, Inc. laboratory report is provided in Attachment A and the Data Quality Assessment and Verification report is included in Appendix C. Appendix D contains a table with the strength of evidence scorecard for natural attenuation at the individual monitoring well locations. The anaerobic biodegradation screening tables were developed by Wiedemeier *et. al.*, 1998³, to evaluate the MNA performance data.

³ Wiedemeier, T.H., Swanson, M.A., Moutoux, D.E., Gordon, E.K., Wilson, J.T., Wilson, B.H., Kampbell, D.H., Haas, P.E., Miller, R.N., Hansen, J.E., and Chapelle, F.H., 1998, Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water, EPA/600/R-98/128, 78 p.



ANALYTICAL RESULTS & DISCUSSION

Building 7 BCP Site

Eleven monitoring wells were sampled in association with the Building 7 (MW-7-1, -7-2, -7-3, -7-4, -7-5, -7-6, -7-7, -7-8, -7-A-6, -7-C-2, and -7-P-1; see Figure 1). The analytical results for the Building 7 monitoring wells are summarized in Table 1 while Appendix D contains the evaluation of the MNA data. A discussion of the results (COC and MNA findings) at the individual monitoring well locations is provided after the summary for the Building 7.

Building 7 Summary

Potential Source Area

The 2014 results for the two potential source area wells, MW-7-7 and MW-7-A-6, indicated that the COCs were detected at concentrations illustrating adequate evidence for anaerobic biodegradation when compared to previous sampling events for 2013 and 2012. Evidence for anaerobic biodegradation at MW-7-7 and MW-7-A-6, is indicated by the increase of a daughter compounds ranging from TCE, *cis*-DCE, *trans*-DCE, to VC which is indicative of natural attenuation.

Mid-Plume Area

The 2014 results for the four mid-plume monitoring wells (MW-7-P-1, MW-7-5, MW-7-6, and MW-7-C-2) indicate limited evidence (MW-7-5, MW-7-6, and MW-7-C-2) and adequate evidence (MW-7-P-1) for anaerobic biodegradation. The COC concentrations from these four wells are one to four orders of magnitude lower than the COC concentrations detected in the upgradient potential source areas at MW-7-A-6 and MW-7-7.

Downgradient Area

The Building 7 down-gradient wells are MW-7-1R, MW-7-2, MW-7-3 and MW-7-4. Monitoring wells MW-7-1A, MW-7-2, and MW-7-4 are located along the GMCH property perimeters and the COC concentrations were below the practical quantitation limits (PQLs), which are below their respective Class GA criteria⁴. COCs were detected at MW-7-3 (63 ppb total COCs) which is located about 600 feet west and upgradient of the GMCH eastern property line. The down-gradient well locations indicate there is a five to seven orders of magnitude decrease from the up-gradient potential source area well

⁴ NYSDEC Class GA Groundwater criteria presented in the Division of Water Technical and Operational Guidance Series (TOGS 1.1.), dated October 1993, reissued June 1998, errata January 1999, April 2000 Addendum and June 2004 Addendum (Class GA).



concentrations. Groundwater contamination does not appear to be migrating from the GMCH property (see Figure 3).

Conclusion

Indicators that natural attenuation is occurring include:

- significant decrease in COC concentrations from potential source area to mid-plume and eventually to below PQLs at the downgradient eastern property line;
- the presence of daughter compounds *cis*-DCE and VC in the mid-point and downgradient portions (MW-7-3) of the plume;
- concentrations of COCs at the eastern and southeastern downgradient property line are below method detection limits; and
- limited to strong evidence of reductive dechlorination occurring in the Building 7 wells in the potential source and mid-plume area based on the anaerobic biodegradation screening table (Appendix D).

Building 7 Individual Well Discussions

MW-7-1R: The COC results were below PQLs, which are less than Class GA criteria, consistent with the 2011, 2012, and 2013 sample results.

MW-7-2: The results were below PQLs, which are less than the Class GA criteria; and are consistent with the 2007, 2008, 2011, 2013 sampling results. The only COC detected to date at this location was TCE detected in 2012 at a concentration of 4 parts per billion (ppb).

The MNA data indicates there is limited evidence for anaerobic biodegradation. However, COCs have been either below PQLs or Class GA criteria at this downgradient location and this is not considered a concern.

MW-7-3: *Cis*-DCE and VC were the two compounds detected at this location, and concentrations are consistent with the 2011, 2012, and 2013 sample results. The detected concentrations were above their respective Class GA criteria. PCE and TCE concentrations have been below PQLs since 2007 when the well was first installed.

The MNA data indicates there is limited evidence for anaerobic biodegradation at this downgradient location. However, aerobic conditions will further enhance the degradation of the breakdown product compounds *cis*-DCE and VC which has been the only COCs detected since 2011 at this location.

MW-7-4: The results were below PQLs, which are less than the Class GA criteria, and is consistent with the 2008, 2011, 2013 sample results. TCE was detected in 2012 at a concentration of 3.6 ppb.



The MNA data indicates there is inadequate evidence for anaerobic biodegradation. However, COCs have been either below PQLs or Class GA criteria at this downgradient location and this is not considered a concern.

MW-7-5: The 2014 results indicate a decrease in PCE, TCE, and *cis*-DCE concentrations from the 2013 results. The concentrations detected for these three compounds exceed their respective Class GA criteria. VC concentration was below its PQL for 2012, 2013, and 2014 likely due to the elevated reporting limits from PCE concentrations.

The MNA data indicates there is limited evidence for anaerobic biodegradation at this mid-plume location.

MW-7-6: The results show a similar decrease in concentrations of the COCs since 2013. The detected COCs concentrations exceed their respective Class GA criteria.

The MNA data indicates there is adequate evidence for anaerobic biodegradation at this mid-plume location.

MW-7-7: The PCE, TCE, *cis*-DCE, and VC results have changed from the 2013 sampling event. PCE concentrations have decreased while concentrations for TCE, *cis*-DCE, and VC have increased.

The MNA data indicates there is adequate evidence for anaerobic biodegradation at this potential source area location.

MW-7-8: The results indicate an increase in the PCE, TCE, and VC concentrations and a decrease in *cis*-DCE. The detected concentrations of these COCs are above their respective Class GA criteria.

The MNA data indicates there is adequate evidence for anaerobic biodegradation at this location.

MW-7-A-6: Concentration results for PCE and TCE have decreased, while *cis*-DCE, *trans*-DCE, and VC have increased in concentrations from 2013. The concentrations of the COCs are above their respective Class GA criteria.

Although the COCs are at their highest concentrations within the Building 7, the MNA data indicates there is adequate evidence for anaerobic biodegradation at this location.

MW-7-C-2: The results for *cis*-DCE and VC have been consistent since 2011. The detected concentration of these two compounds is above their respective Class GA criteria. The results for TCE and PCE have been below PQLs, which is less than their respective Class GA criteria.

The MNA data indicates there is limited evidence for anaerobic biodegradation at this mid-plume location.



MW-7-P-1: Concentrations for *cis*-DCE and VC have continued to decrease since sampling begun in 2006. VC concentrations were above the respective Class GA criteria. The results for PCE and TCE have been historically below PQLs, which is less than their respective Class GA criteria.

The MNA data indicates there is strong evidence for anaerobic biodegradation at this mid-plume location.

Building 8 BCP Site

Eight monitoring wells were sampled in association with Building 8 (MW-6-1, -6-2, -6-F-8, -8-1, -8-2, -8-3, -8-4, and -8-003-B; see Figure 1). The analytical results for the Building 8 monitoring wells are summarized in Table 1 and Appendix D contains the evaluation of the MNA data. A discussion of the results (COC and MNA findings) at the individual monitoring well locations is provided after the summary for the Building 8 BCP Site.

Building 8 Summary

The highest COC concentrations have consistently been detected in wells MW-8-2 (6,660 ppb) and MW-8-003-B (352 ppb). The concentrations of COCs detected at both these locations have shown concentrations decreasing in the sampling events conducted. The MNA data indicates there is limited anaerobic biodegradation. However, *cis*-DCE is generally the COC detected at the highest concentration in locations where COCs are detected, indicating reductive dechlorination of the parent compound (TCE) is occurring at Building 8.

Groundwater within Building 8 is migrating in an easterly direction towards the Delphi Site, which is downgradient (east) of Building 8 (see Figure 2). Natural attenuation processes are reducing the COC contamination at the Delphi Site to non-detectable levels or below the NYSDEC Class GA criteria at the GMCH facility downgradient eastern property line (see Figure 3).

No VOCs were detected above the PQL at monitoring wells MW-6-1 and MW-6-2 located east of Building 8 at the downgradient property boundary. Therefore, off-site groundwater contamination does not appear to be a concern.

Building 8 Individual Well Discussions

MW-6-1: The results for the COCs were below PQLs, which is less than the Class GA criteria, consistent with analytical results back to 2007 and the MNA data indicates there is limited evidence for anaerobic biodegradation.

MW-6-2: The results for the COCs were below PQLs, which is less than the Class GA criteria, consistent with analytical results back to August 2008. We note that TCE was



detected twice prior to August 2008; at 25 ppb during the November 2007 sampling event and at 4.2 ppb during the April 2008 sampling event. The MNA data indicates there is limited evidence for anaerobic biodegradation.

MW-6-F-8: The results for the COCs were below PQLs, which is less than the Class GA criteria, consistent with analytical results back to 2008. The MNA data indicates there is inadequate evidence for anaerobic biodegradation. However, COCs have been below PQLs, which are less than Class GA criteria, at this location and this is not considered a concern.

MW-8-1: The 2014 results for *cis*-DCE was .88 ug/l which is less than the Class GA criteria of 5 ug/l. *Cis*-DCE was the only COC detected in 2014 as wells as in 2011, 2012, and 2013. The detected concentrations in all four years were below 1 ppb and below its Class GA criteria.

The MNA data indicates there is limited evidence for anaerobic biodegradation. We note that the breakdown product compound *cis*-DCE has been the only COC detected and aerobic conditions will further enhance biodegradation.

MW-8-2: The 2014 results for TCE, *cis*-DCE, and VC have support a decrease in concentration since 2013. The detected concentration of these compounds has been above their respective Class GA criteria. The detected concentrations of PCE have been below the PQL, which is less than its Class GA criteria. The MNA data indicates there is limited evidence for anaerobic biodegradation.

MW-8-3: 2014 concentration results for *cis*-DCE continue to decrease in concentrations to below Class GA criteria. PCE, TCE, and VC were below the PQL which is less than the Class GA criteria. The MNA data indicates there is limited evidence for anaerobic biodegradation.

MW-8-4: 2014 results for TCE, *cis*-DEC, and VC continue to show a decrease in concentration since the 2012. The detected concentrations of these compounds are above their respective Class GA criteria. The concentration of PCE has been below the PQL, which is less than its Class GA criteria, since 2011.

The MNA data indicates there is adequate evidence for anaerobic biodegradation.

MW-8-003-B: 2014 results for the COCs continue to show a decrease in concentrations since 2012. The detected concentration of these compounds has been above their respective Class GA criteria. The MNA data indicates there is limited evidence for anaerobic biodegradation.



Building 10 BCP Site

Six monitoring wells were sampled in association with Building 10 (Bldg 10 MW-1, MW-10-2, MW-10-3, MW-9-101A, MW-9-12, and TK-6; see Figure 1) in May 2014. The analytical results for the Building 10 monitoring wells are summarized in Table 1 and Appendix D contains the evaluation of the MNA data. A discussion of the results (COC and MNA findings) at the individual monitoring well locations is provided after the summary for the Building 10 BCP Site.

Building 10 BCP Site Summary

The MNA data at Bldg 10-MW-1 indicates there is generally inadequate to limited evidence for anaerobic biodegradation. However, *cis*-DCE is the COC detected at the highest concentrations at the two downgradient wells (MW-10-2 and MW-10-3) within the Building 10 area. This is indicative that intrinsic reductive dechlorination is occurring down-gradient of Building 10.

Groundwater at the Building 10 appears to be generally migrating in an easterly direction. Another source of COCs is present in the groundwater downgradient (east) of Building 10 associated with Building 7. However, natural attenuation appears to be occurring and reducing the COC to non-detectable levels at the GMCH Facility downgradient property line (see Figure 3).

Building 10 Individual Well Discussions

MW-9-101A: No COCs were reported as being detected for the May 2014 groundwater sampling event. Previously in May 2013 results indicated that PCE (11 ppb) and TCE (1.7 ppb) were detected in this well for the first time since 2006 and the highest total COC concentrations detected at this location to date. The detected concentration of PCE was above its Class GA criteria. In 2014 *Cis*-DCE and VC were below PQL, which is less than their Class GA criteria, consistent with previous sampling events. The well was resampled in October 2013 and the results for COCs were below PQLs, which are less than the Class GA Criteria. The analytical data from this well in May of 2013 may have been an anomalous instance.

The MNA data from MW-9-101A for May 2014 continues to indicate there is inadequate evidence for anaerobic biodegradation. This is not considered a concern as this location is the furthest upgradient well monitored as part of the BCP Sites and results have generally been below PQLs and Class GA criteria.

Bldg 10-MW-1: The PCE and TCE concentrations detected in the May 2014 sampling event slightly decreased but remain in the same range of values as past sampling events. The *cis*-DCE and VC results were below PQL in 2012, 2013, and 2014 which are below the Class GA criteria. The concentrations of these two compounds detected in the 2007 and 2011 sampling events were above their respective Class GA criteria.



The MNA data from Bldg 10 MW-1 for May 2014 indicates there is limited evidence for anaerobic biodegradation. However, the results at Building 10 downgradient wells, MW-10-2 and MW-10-3, indicated a decrease in the parent COC concentrations from Bldg 10 MW-1 and elevated *cis*-DCE concentrations at MW-10-2 and MW-10-3 indicating reductive dechlorination is occurring.

MW-10-2: The results of PCE and TCE have continued to decrease in concentration since 2011. *Cis*-DCE has been consistently present at elevated concentrations and the VC results have been within a consistent range since 2011. The detected concentrations of the COCs are above their respective Class GA criteria.

The MNA data indicates there is limited evidence for anaerobic biodegradation. However, as mentioned above the parent compound (PCE) concentrations are decreasing and the daughter compound (*cis*-DCE) concentrations are increasing, indicating that reductive dechlorination processes are active at this location.

MW-10-3: The results of TCE, PCE and *cis*-DCE show a decrease in concentrations for May 2014 as compared to 2013 but are within the range of historical data. The detected concentrations of TCE, PCE and *cis*-DCE are above their respective Class GA criteria.

The MNA data indicates there is inadequate evidence for anaerobic biodegradation, although the daughter compound concentrations for *cis*-DCE historically have been high at this location, indicating that reductive dechlorination processes are active at this location.

CONCLUSIONS

Groundwater contamination is present within the spatial limits and downgradient of the BCP Site (see Figure 3). Groundwater contamination from Building 8 is migrating east towards the adjacent Delphi Site. Groundwater contamination from Buildings 7 and 10 are generally migrating in an easterly direction from the source areas identified. However, contaminated groundwater does not appear to be migrating from the GMCH facility as the monitoring wells along the downgradient eastern property line of the GMCH facility do not exhibit concentrations of COCs above the PQLs, which are below the Class GA criteria. The four downgradient wells (from north to south) are: MW-6-2, MW-6-1, MW-7-2 and MW-7-4 (see Figure 1). MW-7-1R is located near the southern property line and does not exhibit concentrations of COCs above the PQLs, which are below the Class GA criteria. We also note that downgradient monitoring well, MW-13, from the Delphi Site, does not show concentrations of COCs above the laboratory detection limits. Therefore, the results from the Building 7, Building 8 and Delphi Site downgradient wells indicate the plume is stable at the Site perimeter.

Although there is limited to adequate evidence for anaerobic biodegradation at well locations where the COCs have been detected, it does not appear that contaminated



groundwater is migrating beyond the GMCH facility property boundary in association with the BCP Site.

RECOMMENDATIONS

GZA recommends continuing the annual groundwater sampling event to include the same 25 wells sampled in 2014 using the methodologies outlined in the Delphi Site SMP, in the spring of 2015.

Please do not hesitate to contact the undersigned if you have any questions or require any additional information.

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

A handwritten signature in blue ink that reads "James J. Richert".

James J. Richert, P.G., C.P.G.
Senior Project Manager

A handwritten signature in blue ink that reads "Bart A. Klettke".

Bart A. Klettke, P.E.
Principal

Table 1 – Summary of Groundwater Sample Analytical Results
Figure 1 – Site Plan
Figure 2 – May 2014 Groundwater Contour Map
Figure 3 – Extent of Groundwater Contamination
Appendix A: Monitoring Well Observations & Groundwater Sampling Logs
Appendix B: Previous Analytical Results & Graphs
Appendix C: Data Quality Assessment and Verification Report
Appendix D: Anaerobic Biodegradation Screening Tables





Attachment A: Test America Analytical Laboratory Report

FIGURES



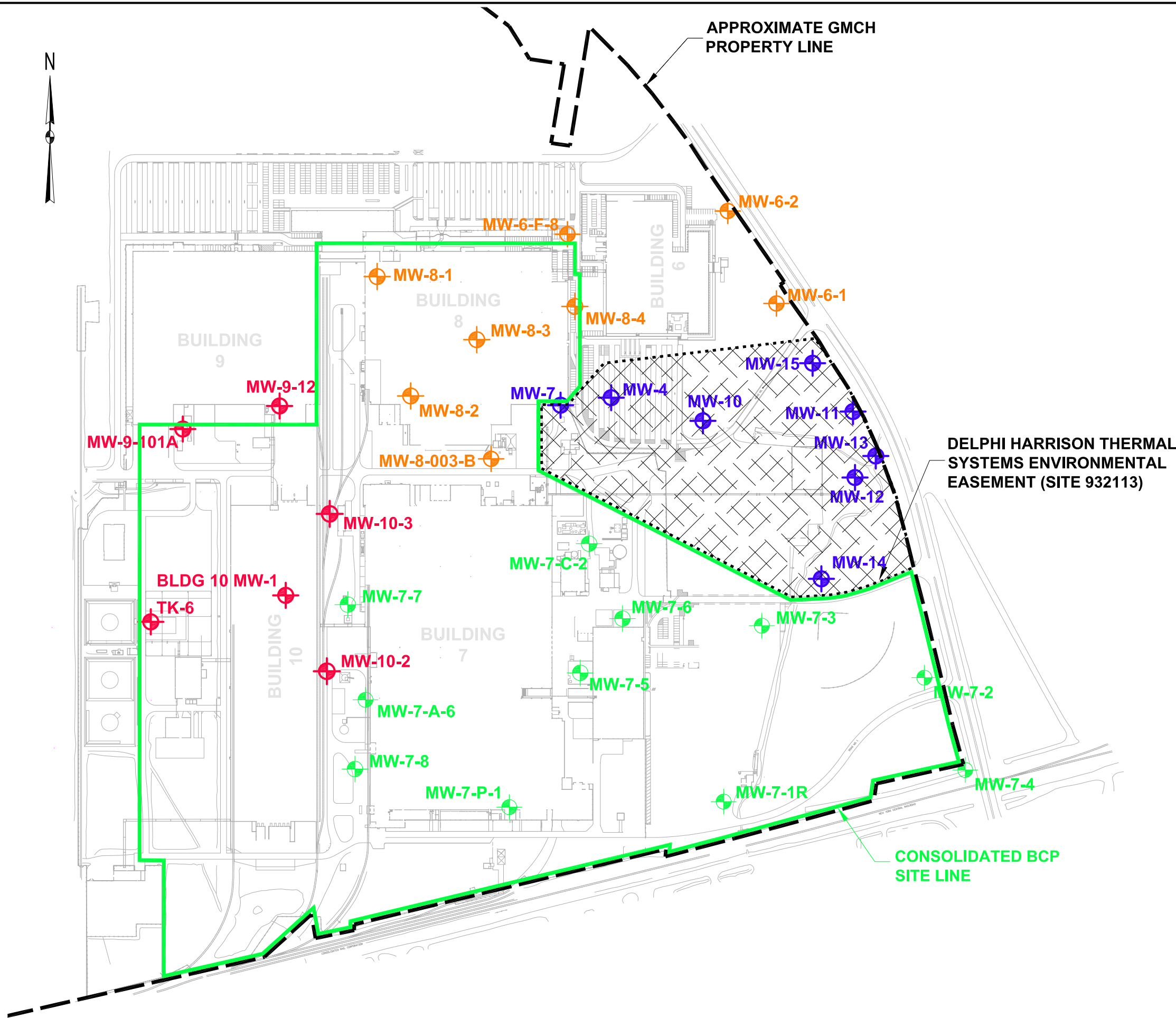
APPROXIMATE GMCH PROPERTY LINE

LEGEND:

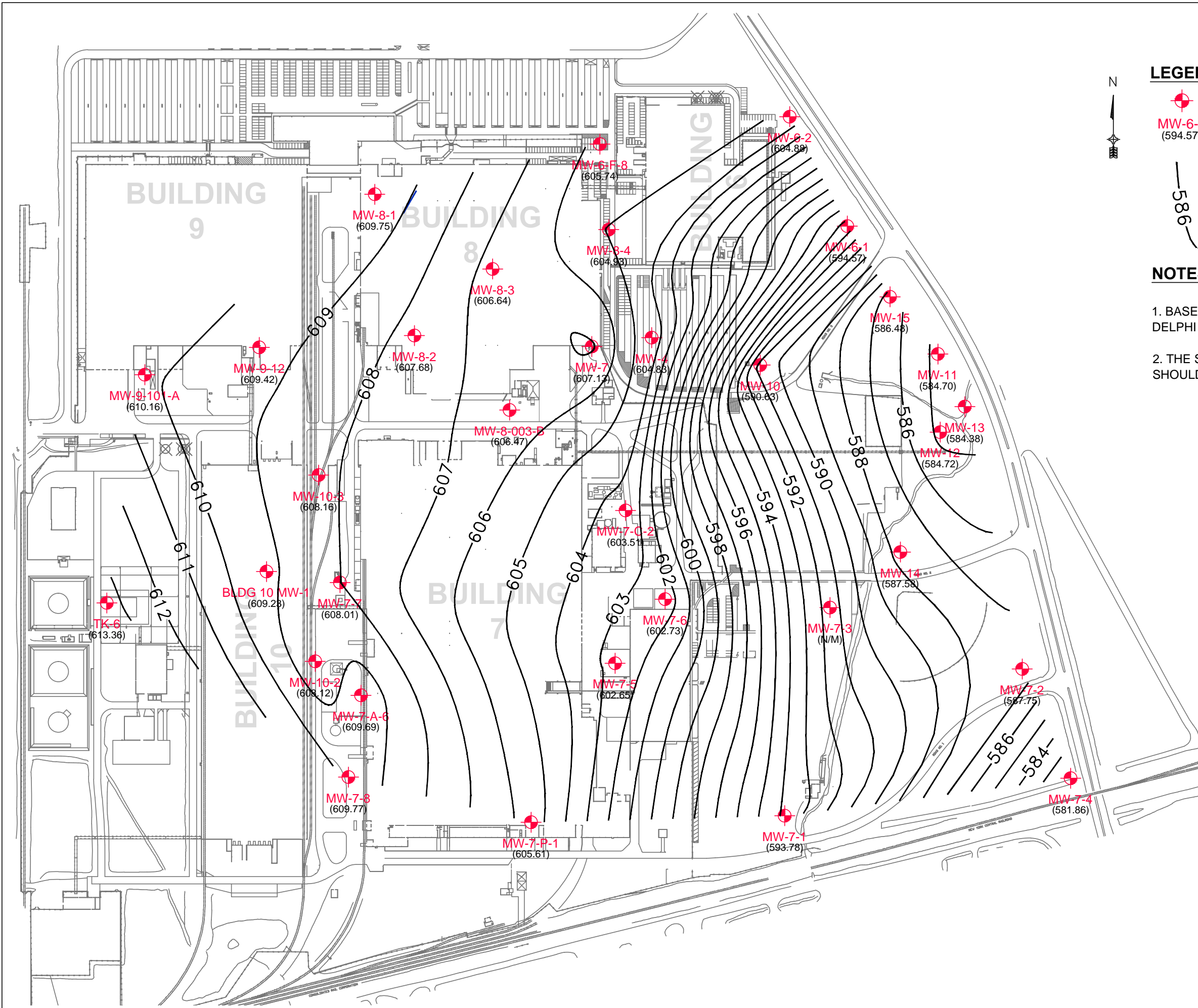
-  **MW-11** APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITHIN THE DELPHI HARRISON THERMAL SYSTEMS SITE SAMPLED MAY 2014
-  **MW-7-2** APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS ASSOCIATED WITH BUILDING 7
-  **MW-6-1** APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS ASSOCIATED WITH BUILDING 8
-  **MW-10-2** APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS ASSOCIATED WITH BUILDING 10

NOTES:



1. BASE MAP ADAPTED FROM A DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS SEPT. 2007.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.



NO.	ISSUE/DESCRIPTION	BY	DATE
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.			
GM COMPONENTS HOLDINGS, LLC LOCKPORT, NEW YORK FACILITY			
BCP SITE GROUNDWATER MONITORING SITE PLAN			
PREPARED BY:  GZA GeoEnvironmental of N.Y. Engineers and Scientists www.gza.com		PREPARED FOR: GMCH LOCKPORT FACILITY 200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK	
PROJ MGR: JR	REVIEWED BY: TB	CHECKED BY: BAK	FIGURE NO
DESIGNED BY: RJS	DRAWN BY: RJS	SCALE: SHOWN	1
DATE: AUGUST 2014	PROJECT NO. 56546	REVISION NO.	
			SHEET NO. 1 OF 3



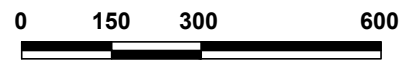
LEGEND:


-  **MW-6-1**
(594.57)
APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITHIN THE DELPHI HARRISON THERMAL SYSTEMS SITE SAMPLED MAY 2014 WITH GROUNDWATER ELEVATION (FEET) MEASURED ON MAY 15, 2014
-  **586**
GROUNDWATER CONTOUR (FEET) PLOTTED BASED UPON MAY 15, 2014 GROUNDWATER MEASUREMENTS

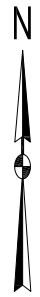
NOTES:

1. BASE MAP ADAPTED FROM A DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS SEPT. 2007.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

APPROXIMATE SCALE IN FEET



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GM COMPONENTS HOLDINGS, LLC LOCKPORT, NEW YORK FACILITY			
BCP SITE GROUNDWATER MONITORING GROUNDWATER CONTOUR MAP			
PREPARED BY:  GZA GeoEnvironmental of N.Y. Engineers and Scientists www.gza.com		PREPARED FOR: GMCH LOCKPORT FACILITY 200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK	
PROJ MGR: JR	REVIEWED BY: TB	CHECKED BY: BAK	FIGURE 2
DESIGNED BY: RJS	DRAWN BY: RJS	SCALE: SHOWN	
DATE: AUGUST 2014	PROJECT NO: 56546	REVISION NO.	
			SHEET NO. 2 OF 3






APPROXIMATE GMCH PROPERTY LINE

APPROXIMATE EXTENT OF GROUNDWATER CONTAMINATION >5 ppb TOTAL VOCs

CONSOLIDATED BCP SITE LINE

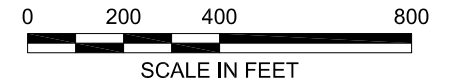
DELPHI HARRISON THERMAL SYSTEMS ENVIRONMENTAL EASEMENT (SITE 932113)


LEGEND:

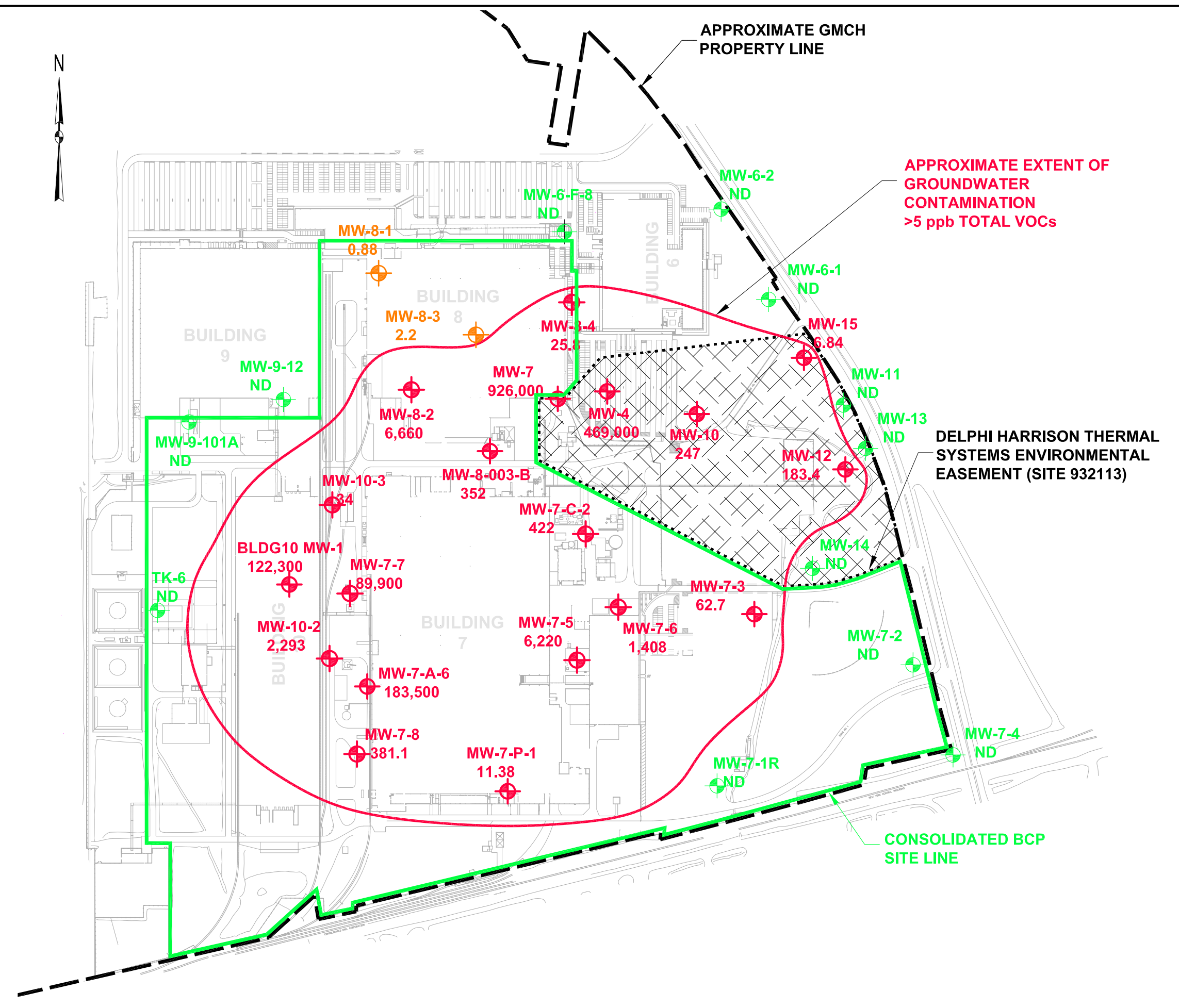
-  MW-7-2 ND
APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITH NON-DETECT LEVELS FOR CHLORINATED SOLVENTS DURING MAY 2014 SAMPLING
-  MW-8-3 2.2
APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITH CHLORINATED SOLVENT LEVELS MEASURING LESS THAN 5 PARTS PER BILLION (ppb)
-  MW-12 183.4
APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITH CHLORINATED SOLVENT LEVELS MEASURING GREATER THAN 5 PARTS PER BILLION (ppb)

NOTES:

1. BASE MAP ADAPTED FROM A DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS SEPT. 2007.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.



NO.	ISSUE/DESCRIPTION	BY	DATE
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GM COMPONENTS HOLDINGS, LLC LOCKPORT FACILITY			
BCP SITE GROUNDWATER EXTENT OF CHLORINATED SOLVENT CONTAMINATION			
PREPARED BY:  GZA GeoEnvironmental of N.Y. Engineers and Scientists www.gza.com		PREPARED FOR: GM COMPONENTS HOLDINGS, LLC 200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK	
PROJ MGR: JR	REVIEWED BY: TB	CHECKED BY: BAK	FIGURE NO
DESIGNED BY: RJS	DRAWN BY: RJS	SCALE: SHOWN	3
DATE: AUGUST 2014	PROJECT NO. 56546	REVISION NO.	



TABLES

Table 1
Summary of Groundwater Sample Analytical Results
GMCH Lockport Site
Buildings 7, 8 10
Site No. C932138

Sample Location Sample Date	Class GA Criteria	BUILDING 7 AREA WELLS													
		MW-7-1R 5/27/2014	MW-7-2 5/23/2014	MW-7-3 6/3/2014	MW-7-4 5/23/2014	MW-7-5 5/27/2014	MW-7-6 5/28/2014	MW-7-7 5/29/2014	MW-7-8 5/29/2014	MW-7-A-6 5/30/2014	MW-7-C-2 5/28/2014	MW-7-P-1 5/16/2014			
		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			
VOC Compounds of Concern (ug/L)															
cis-1,2-Dichloroethene	5	<0.81	<0.81	5.7	<0.81	440	500	8,700	84	29,000	410	2.4			
Tetrachloroethene	5	<0.36	<0.36	<0.36	<0.36	5,200	570	76,000	180	130,000	<1.8	<0.36			
trans-1,2-dichloroethene	5	<0.90	<0.90	<0.90	<0.90	<90	<9	<900	<3.6	110	E	<4.5			
Trichloroethene	5	<0.46	<0.46	<0.46	<0.46	580	280	3,400	110	23,000	<2.3	0.78			
Vinyl Chloride	2	<0.90	<0.90	57	<0.90	<90	58	1,800	7.1	1,500	E	12			
Total VOCs	2	0	0	62.7	0	6,220	1,408	89,900	381.1	183,610	422	14.38			
Field Parameters															
Temperature (Deg. C)	NV	15.6	9.9	15.9	8.9	14.6	12	12.4	11.00	14.1	13.4	20.7			
Specific Conductance (mS/cm)	NV	5.3	0.96	23.93	1.2	11.9	13.27	6.07	9.21	2.61	2.26	22.13			
Dissolved Oxygen (mg/L)	NV	0.07	0.09	0.19	3.25	0.07	0.08	0.22	0.32	0.1	0.04	0.1			
Oxygen Reduction Potential (mv)	NV	3.6	-10.2	-112.9	171.5	98.2	34.3	-226.6	-150	-6.9	-82.3	-127.5			
pH (std. units)	NV	6.87	7.15	6.67	7.22	6.68	6.96	8.51	7.54	6.8	7.01	6.24			
Turbidity (NTUs)	NV	3.15	3.47	3.68	3.51	4.12	1.58	4.93	12.5	1.82	5.81	5.35			
Inorganics (mg/L)															
Iron	0.3	0.42	0.076	B	0.62	0.28	B	0.51	0.44	0.480	2.3	0.35	0.59	81.3	
Magnesium	35 ^{Note 4}	105	29.7	211	31.7	150	81	46	172	97.7	83	647			
Manganese	NV	0.35	0.023	0.17	0.012	1.1	0.18	0.016	0.1	0.88	0.17	9.4			
Miscellaneous Water Quality Parameters															
Methane (ug/L)	NV	25.0	1.60	J	310	<1.0	9	110	580	43	800	77	2,200		
Ethane (ug/L)	NV	<1.5	<1.5	8.6	<1.5	<1.5	<1.5	2.4	J	<75	<1.5	J	28	<1.5	20
Ethene (ug/L)	NV	<1.5	<1.5	9	<1.5	<1.5	<1.5	260	J	<1.5	J	230	<1.5	1.8	J
Carbon Dioxide (ug/L)	NV	15,000	9,100	20,000	7,000	23,000	11,000	<1,000	<1,000	27,000	11,000	38,000			
Total Organic Carbon (mg/L)	NV	1.2	1.1	2.3	0.59	J	3.4	1.5	13.7	0.84	J	9.7	0.95	J	3.9
Alkalinity (mg/L)	NV	333	356	B	297	372	B	356	376	59.3	86.2	481	292	231	B
Ammonia (mg/L)	NV	0.039	<0.009	1.8	<0.009	0.012	J	0.03	1.2	0.078	0.055	0.35	141		
Chloride (mg/L)	NV	1,410	80.3	7,260	175	3,980	3,320	926	2,540	625	253	4,420			
Nitrate (mg/L)	NV	<0.02	0.055	0.32	0.270	1.80	0.15	0.910	<0.020	<0.020	0.034	J	<0.020		
Nitrite (mg/L)	NV	<0.02	0.034	J	0.024	J	0.036	J	0.051	<0.02	0.034	J	<0.020	<0.020	<0.020
Sulfate (mg/L)	NV	98.6	18.9	906	37.8	236	177	B	135	110	62.8	552	43.1		
Sulfide (mg/L)	NV	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	0.8	<0.052	<0.052	<0.052	0.063	J	

Notes:

1. Only compounds detected in one or more of the groundwater samples are presented in this table.
2. "<" indicates compound was not detected above the method detection limit.
3. Analytical testing completed by TestAmerica.
4. Criteria is a guidance value.
5. Laboratory qualifiers: B = compound was found in the blank and sample; J = result is less than the RL but greater than or equal to the MDL and the concentration is an approximation; * - LCS or LCSD exceeds the control limits. E = Results exceeded calibration range.
6. mg/L = parts per million; ug/L = parts per billion
7. NYSDEC Class GA Groundwater Criteria as promulgated in 6 NYCRR 703; Table 1 in Technical and Operational Guidance Series (1.1.1): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, dated October 1993; revised June 1998; errata dated January 1999; addendum dated April 2000.
8. NV = no value, NT = not tested.
9. Shaded concentrations exceed Class GA criteria.
10. Results presented for MW-7-5 are the higher of this sample and its respective duplicate.

Table 1
Summary of Groundwater Sample Analytical Results
GMCH Lockport Site
Buildings 7, 8 10
Site No. C932138

Sample Location Sample Date	Class GA Criteria	BUILDING 8 AREA WELLS								BUILDING 10 AREA WELLS					
		MW-6-1 5/14/2014	MW-6-2 5/14/2014	MW-6-F-8 5/30/2014	MW-8-1 5/15/2014	MW-8-2 5/16/2014	MW-8-3 5/16/2014	MW-8-4 6/2/2014	MW-8-003-B 5/29/2014	MW-9-101A 5/22/2014	MW-9-12 5/21/2014	TK-6 6/2/2014	BLDG-10-MW-1 6/3/2014	MW-10-2 5/22/2014	MW-10-3 5/22/2014
		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
VOC Compounds of Concern (ug/L)															
cis-1,2-Dichloroethene	5	<0.81	<0.81	<0.81	0.88 J	6,400	2.2	17	220	<0.81	<0.81	<0.81	<1,600	1,900	11
Tetrachloroethene	5	<0.36	<0.36	<0.36	<0.36	<45	<0.36	<0.36	55	<0.36	<0.36	<0.36	120,000	83	14
trans-1,2-dichloroethene	5	<0.90	<0.90	<0.90	<0.90	<110	<0.9	<0.90	<23.0	<0.90	<0.9	<0.90	<1,800	24	<0.9
Trichloroethene	5	<0.46	<0.46	<0.46	<0.46	110 J	<0.46	5.4	46	<0.46	<0.46	<0.46	2,300	240	9
Vinyl Chloride	2	<0.90	<0.90	<0.90	<0.90	150	<0.9	3.4	31	<0.90	<0.9	<0.90	<1,800	70	<0.9
Total VOCs	2	0	0	0	0.88	6,660	2.2	25.8	352	0	0	0	122,300	2,317	34
Field Parameters															
Temperature (Deg. C)	NV	13.1	13	13.1	14	19.2	20.4	15.9	12.8	13.1	12	16.9	19.7	13	11.7
Specific Conductance (mS/cm)	NV	3.23	5.82	11.73	5.98	1.97	6.5	11.89	3.4	7.11	4.02	4.38	2.25	6.56	0.84
Dissolved Oxygen (mg/L)	NV	0.04	0.1	0.16	0.07	0.06	2.51	0.06	1.54	4.31	0.14	2.35	0.18	0.08	1.75
Oxygen Reduction Potential (mv)	NV	-81.6	54.8	75.7	-302.5	-218.1	-75.1	-122	123.4	171.5	-38.5	118.9	-47.3	-67.5	116.3
pH (std. units)	NV	6.83	6.91	6.61	6.85	7.17	6.8	7.23	8.08	7.11	7.09	7.25	6.75	7.02	7.71
Turbidity (NTUs)	NV	15.1	3.88	4.32	2.59	1.17	1.32	3.2	14.2	3.12	11.8	2.7	1.43	3.72	1.47
Inorganics (mg/L)															
Iron	0.3	11.7 B	0.062 B	0.22	0.023 J	0.29	3.8	3.1	0.52	0.027 J	0.82	0.025 J	1	0.12	0.021 J
Magnesium	35 ^{Note 4}	45	44.4	359	102	42.1	102	121	10.7	150	46.9	45	87.3	75	21.5
Manganese	NV	1.7	0.3	0.69	0.12	0.023	1.7	1	0.18	0.0029 J	0.26	0.0019 J	0.42	0.11	<0.0004
Miscellaneous Water Quality Parameters															
Methane (ug/L)	NV	16	<1.0	12	120	120	150	140	7.6	<1.0	14	<1.0	7.7	15	<1.0
Ethane (ug/L)	NV	<1.5	<1.5	<1.5	14	<1.5	<1.5	<1.5	<1.5 J	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Ethene (ug/L)	NV	<1.5	<1.5	<1.5	<1.5	1.7 J	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Carbon Dioxide (ug/L)	NV	32,000	20,000	25,000	18,000	10,000	9,400	4,200	<1000	5,300	5,400	6,700	19,000	9,700	1,200
Total Organic Carbon (mg/L)	NV	3.9	2.6	2	0.55 J	2.3	7	2.9	4	5.2	1.7	1.4	5.4	2	1.5
Alkalinity (mg/L)	NV	422	419	392	310	366 B	364 B	175	160	205 B	271 B	365	315	305 B	144 B
Ammonia (mg/L)	NV	0.35	<0.009	<0.009	1.2	0.78	2.8 B	0.18	0.014 J	<0.009	0.023	<0.02	0.16	0.49	<0.009
Chloride (mg/L)	NV	765	1,510	3,840	1,430	305	1,710	4,160	1,270	1,710	1,040	949	414	1,740	88.2
Nitrate (mg/L)	NV	<0.02	0.240	0.16	<0.020	0.067	0.076	<0.02	0.62	9.1	1.7	0.75	0.033 J	0.063	1.7
Nitrite (mg/L)	NV	<0.02	<0.02	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02	0.026 J	<0.02	<0.02	<0.02	<0.02
Sulfate (mg/L)	NV	43.8	122	406	645	194	56.6	455	78.5	1,420	186	212	240	268	136
Sulfide (mg/L)	NV	<0.052	<0.052	<0.052	2.3 J	0.27	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052

Notes:

1. Only compounds detected in one or more of the groundwater samples are presented in this table.
2. "<" indicates compound was not detected above the method detection limit.
3. Analytical testing completed by TestAmerica.
4. Criteria is a guidance value.
5. Laboratory qualifiers: B = compound was found in the blank and sample; J = result is less than the RL but greater than or equal to the MDL and the concentration is an approximation; * - LCS or LCSD exceeds the control limits. E = Results exceeded calibration range.
6. mg/L = parts per million; ug/L = parts per billion
7. NYSDEC Class GA Groundwater Criteria as promulgated in 6 NYCRR 703; Table 1 in Technical and Operational Guidance Series (1.1.1): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, dated October 1993; revised June 1998; errata dated January 1999; addendum dated April 2000.
8. NV = no value, NT = not tested.
9. Shaded concentrations exceed Class GA criteria.
10. Results presented for MW-7-5 are the higher of this sample and its respective duplicate.

APPENDIX A

**MONITORING WELL OBSERVATION &
GROUNDWATER SAMPLING LOGS**

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME GMCH BCP Site PROJECT NO. 56546
 SAMPLING CREW MEMBERS T. Bohlen SUPERVISOR C. Boron
 DATE OF SAMPLE COLLECTION 5/16/14 - 6/3/14

[Note: For 2" dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-7-P-1-051614	MW-7-P-1	615.09	19.85	9.52	605.57	1.7	/	1.7	6.24	20.7	2213	1102	VOC, MNA
MW-7-4-052214	MW-7-4	593.53	21.42	11.62	581.91	1.6	/	(Dry) 1.2	7.22	8.9	1.20	831	VOC, MNA
MW-7-2-052314	MW-7-2	592.57	21.26	5.07	587.50	2.7	/	2.8	7.15	9.9	0.96	1455	VOC, MNA
MW-7-1-052714	MW-7-1	597.67	22.51	4.19	593.48	3.0	/	3.0	6.87	15.6	5.30	1310	VOC, MNA
MW-7-5-052714	MW-7-5	610.96	21.95	8.42	602.54	2.2	/	2.2	6.86	14.6	11.90	1630	VOC, MNA
MW-7-8-052914	MW-7-8	610.92	19.41	1.21	609.71	3.0	/	(Dry) 3.0	7.54	11.0	9.21	958	VOC, MNA
MW-7-6-052814	MW-7-6	606.30	16.48	3.85	602.45	2.1	/	2.1	6.96	12.0	13.27	1300	VOC, MNA
MW-7-C-2-052814	MW-7-C-2	609.42	24.08	5.14	604.28	3.1	/	3.1	7.01	13.4	2.26	1735	VOC, MNA

Additional Comments:

Copies to:

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME GMCH BCP Site

PROJECT NO. 56546

SAMPLING CREW MEMBERS T. Bohlen

SUPERVISOR C. Boron

DATE OF SAMPLE COLLECTION 5/16/14 - 6/3/14

[Note: For 2' dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-7-7-052914	MW-7-7	610.24	19.50	2.73	607.51	2.7	/	2.7	8.51	12.4	6.07	1525	VOC MNA
MW-7-A-6-053014	MW-7-A-6*		14.34	2.75		1.9	/	1.9	6.80	14.1	2.61	1115	VOC MNA
MW-7-3-060314	MW-7-3	594.04	25.07	3.75	590.29	3.5	/	3.6	6.67	15.9	23.93	1530	VOC MNA
							/						
							/						
							/						
							/						
							/						

Additional Comments: * riser pipe uplifted above ground surface

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FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BOPSITE
 Ref. No.: 56546

Date: 5/27/14
 Personnel: T. Bohan

Monitoring Well Data:

Well No.: MW-7-1
 Measurement Point: YDR
 Constructed Well Depth (ft): 23.7
 Measured Well Depth (ft): 21.51 (Hard sounding @ bottom)
 Depth of Sediment (ft): _____

Screen Length (ft): 10'
 Depth to Pump Intake (ft)⁽¹⁾: 17'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 3.0g
 Initial Depth to Water (ft): 4.19

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
1000		4.36		6.94	15.6	5.75	15.4	0.63	3.13	0	0
1030		4.77		6.91	14.7	5.74	-43.7	0.18	3.07	0.3	0
1100		4.77		6.89	14.6	5.54	-24.6	0.11	2.41	0.7	0
1130		4.77		6.88	14.7	5.40	-3.4	0.09	2.57	1.2	0
1200		4.77		6.88	15.5	5.32	-8.5	0.11	2.62	1.8	0
1230		4.77		6.88	15.5	5.32	3.0	0.08	2.40	2.3	0
1300		4.77		6.87	15.5	5.30	3.1	0.07	3.24	2.7	0
1305		4.77		6.87	15.5	5.30	3.3	0.07	3.21	2.9	0
1310		4.77		6.87	15.6	5.30	3.6	0.07	3.15	3.0	1

Notes:

- The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- The well screen volume will be based on a 5-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- The drawdown from the initial water level should not exceed 0.3 ft.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s.

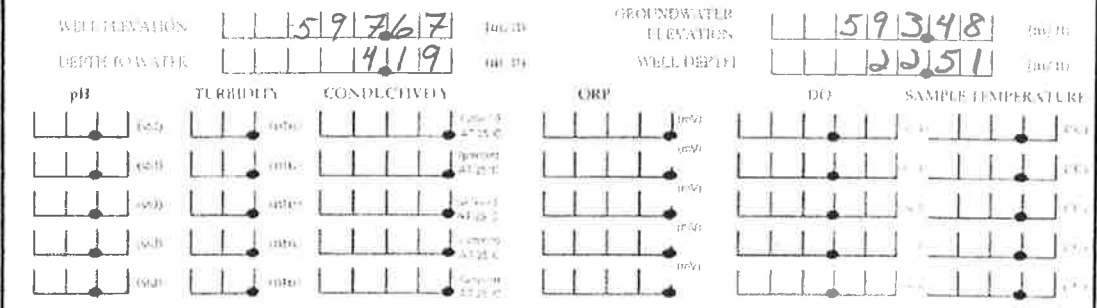
WELL PURGING FIELD INFORMATION FORM
 SITE/PROJECT NAME: 6MLH BOP Site JOB# 56546
 WELL# MW-7-1

WELL PURGING INFORMATION
 PURGING DATE: 052714 SAMPLE DATE: 052714 WATER VOL. DRAINING: 30 INITIAL VOL. DRAINING: 30
(PURGING DATE) (SAMPLE DATE) (LITERS/GALLONS) (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT: 5 (SUBJECT) DEDICATED 0 (YES/NO)
 SAMPLING EQUIPMENT: 0 (YES/NO)

PURGING DEVICE	<u>B</u>	1. AIRLIFT/ROCKET	2. PERMEABLE	3. WATER	4. OTHER
SAMPLING DEVICE	<u>B</u>	1. AIRLIFT/ROCKET	2. PERMEABLE	3. WATER	4. OTHER
PURGING DEVICE	<u>E</u>	1. AIRLIFT/ROCKET	2. PERMEABLE	3. WATER	4. OTHER
SAMPLING DEVICE	<u>E</u>	1. AIRLIFT/ROCKET	2. PERMEABLE	3. WATER	4. OTHER
PURGING DEVICE	<u>E</u>	1. AIRLIFT/ROCKET	2. PERMEABLE	3. WATER	4. OTHER
SAMPLING DEVICE	<u>E</u>	1. AIRLIFT/ROCKET	2. PERMEABLE	3. WATER	4. OTHER

FILTERING DEVICES: 0 (YES/NO) 0 (YES/NO) 0 (YES/NO) 0 (YES/NO)



FIELD COMMENTS
 SAMPLE APPROPRIATE: Good (YES/NO) None (YES/NO) Clear (YES/NO) Clear (YES/NO)
 WEATHER CONDITIONS: 5-10 (TEMP) W (WIND) 0 (PRECIPITATION)
 SPECIFIC COMMENTS: PM showers forecasted

DATE: 4/27/14 NAME: Thomas Bohlen SIGNATURE: Thomas Bohlen

FOR MORE INFORMATION CONTACT NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/23/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-2
 Measurement Point: TDR
 Constructed Well Depth (ft): 20'
 Measured Well Depth (ft): 21.62
 Depth of Sediment (ft): _____

Screen Length (ft): 10-20 = 10'
 Depth to Pump Intake (ft)⁽¹⁾: 17'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 2.7 gallons
 Initial Depth to Water (ft): 5.07

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
1238		5.35		7.28	11.0	0.89	-1.4	0.75	3.31	0	0
1303		8.92		7.18	9.4	0.81	6.8	0.15	3.25	0.7	0
1330		8.92		7.18	10.3	0.84	-11.2	0.13	2.99	1.2	0
1400		8.92		7.17	9.7	0.90	-2.0	0.13	2.85	1.8	0
1430		8.92		7.15	9.8	0.94	-12.9	0.11	3.71	2.2	0
1445		8.92		7.16	9.8	0.95	-13.6	0.10	3.65	2.5	0
1450		8.92		7.15	9.8	0.96	-10.6	0.09	3.58	2.6	0
1455		8.92		7.15	9.9	0.96	-10.2	0.09	3.47	2.8	1

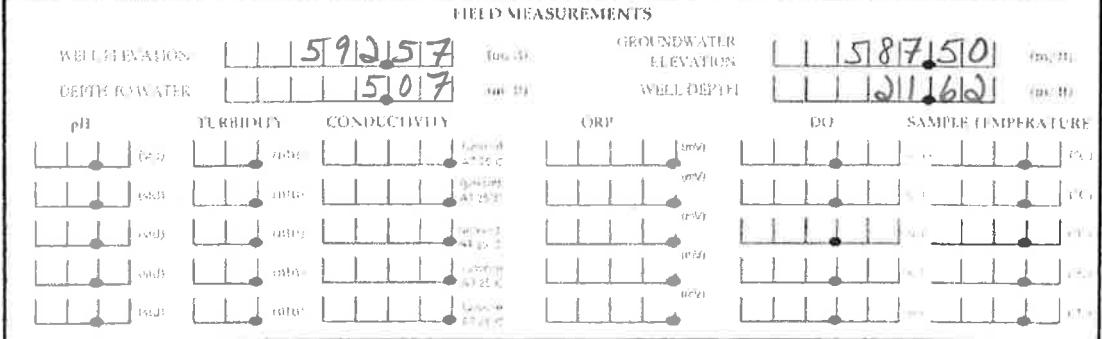
Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi(D/2)^2(5 \times 12)(2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

WELL PURGING FIELD INFORMATION FORM
 SITE/PROJECT NAME: GMCH BCP Site JOB# 56546
 WELL# MW-7-2

WELL PURGING INFORMATION
 PURGE DATE (MM/DD/YY) 10/5/23/14 SAMPLE DATES (MM/DD/YY) 10/5/23/14 WATER VOL. PURGED (LITERS/GALLONS) 127 WATER VOL. IMPROVED (LITERS/GALLONS) 28

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT (CIRCLE ONE) B DEDICATED (CIRCLE ONE)
 PURGING DEVICE: B A. SUBMERGIBLE PUMP B. GAS-LIFT PUMP C. SAILER
 D. POSITIVE DISPLACEMENT PUMP E. TURBO PUMP F. WATERBURY
 SAMPLING DEVICE: B G. HYDRAULIC PUMP H. GRAVITY SITTLES
 PURGING DEVICE: E A. SAILER B. POSITIVE DISPLACEMENT PUMP C. TURBO PUMP
 SAMPLING DEVICE: E D. HYDRAULIC PUMP
 PURGING DEVICE: E A. SAILER B. POSITIVE DISPLACEMENT PUMP C. TURBO PUMP
 SAMPLING DEVICE: E D. HYDRAULIC PUMP E. GRAVITY SITTLES F. COMBINATION
 G. POLYPROPYLENE H. POLYPROPYLENE
 FILTERING DEVICES 0.15 A. INTHE GRADUATED B. PRESSURE C. VACUUM



FIELD COMMENTS
 SAMPLE QUALITY: Good more (EXCELLED) Clear (EXCELLED) Clear
 WEATHER / CONDITIONS: 10-15 (EXCELLED) SW (EXCELLED) 0 (EXCELLED) showers
 SPECIAL COMMENTS:

DATE OF FIELD SAMPLING: 10/5/23/14 BY: Thomas Bohlen APPROVED: Thomas Bohlen

FIGURE INFORMATION SAMPLES SHOULD BE ANALYZED BY A REGIONAL REGIONAL LABORATORY TO PROTECT THE PUBLIC INTEREST

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH RCP Site
 Ref. No.: 56546

Date: 6/3/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-3
 Measurement Point: TOR
 Constructed Well Depth (ft): 25'
 Measured Well Depth (ft): 25.07'
 Depth of Sediment (ft): _____

Screen Length (ft): 15-25 = 10
 Depth to Pump Intake (ft)⁽¹⁾: 20
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 3.5 gallons
 Initial Depth to Water (ft): 3.75

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
1200		3.94		6.62	15.8	19.70	148.9	0.88	5.00	0	0
1230		5.89		6.60	15.5	19.63	60.4	0.20	4.88	0.3	0
1300		7.20		6.62	15.6	19.55	-8.4	0.16	4.66	0.9	0
1330		7.92		6.64	15.6	20.59	-70.1	0.13	1.59	1.4	0
1400		8.14		6.65	15.9	20.15	-92.1	0.11	1.83	2.0	0
1430		8.33		6.67	16.2	23.00	-114.7	0.13	2.29	2.5	0
1500		8.58		6.67	15.7	23.06	-101.8	0.12	2.31	3.0	0
1510		8.70		6.67	15.9	23.21	-111.7	0.18	3.93	3.2	0
1520		8.70		6.67	16.0	23.87	-112.7	0.19	3.95	3.4	0
1525		8.70		6.67	15.9	23.89	-112.8	0.19	3.72	3.5	0
1530		8.70		6.67	15.9	23.93	-112.9	0.19	2.68	3.6	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

8 VM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMCH BCP Site

WELL# MW-7-3

WELL PURGING INFORMATION

106103114

PURGE DATE
(MM/DD/YY)

106103114

SAMPLE DATE
(MM/DD/YY)

11315

WELL VOL ESTIMATING
(LITERS/GALLONS)

136

WELL VOL ESTIMATING
(LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: PERM. A. OTHER: SAMPLING EQUIPMENT: PERM. A. OTHER:

PURGING DEVICE	<input checked="" type="checkbox"/> B	A. SUBMERGIBLE PUMP	B. SURFACE PUMP	C. WATER	<input type="checkbox"/>
SAMPLING DEVICE	<input checked="" type="checkbox"/> D	D. STANDPIPE	E. TUBESUMP	F. WALLEZBAKE	<input type="checkbox"/>
PURGING DEVICE	<input checked="" type="checkbox"/> E	G. PERMEAMETER	H. OTHER	I. OTHER	<input type="checkbox"/>
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	J. OTHER	K. OTHER	L. OTHER	<input type="checkbox"/>
PURGING DEVICE	<input checked="" type="checkbox"/> E	M. OTHER	N. OTHER	O. OTHER	<input type="checkbox"/>
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	P. OTHER	Q. OTHER	R. OTHER	<input type="checkbox"/>

FIELD MEASUREMENTS

WELL ELEVATION	<u>11594.04</u>	(ft.)	GROUNDWATER ELEVATION	<u>11590.29</u>	(ft.)
DEPTH TO WATER	<u>3.75</u>	(ft.)	WELL DEPTH	<u>1510.7</u>	(ft.)
pH	<u>7.0</u>	(pH)	TURBIDITY	<u>0.0</u>	(ntu)
CONDUCTIVITY	<u>175</u>	(µmhos/cm)	ORP	<u>100</u>	(mv)
DO	<u>8.5</u>	(mg/L)	SAMPLE TEMPERATURE	<u>15.5</u>	(°C)

FIELD COMMENTS

SAMPLE QUALITY: Good TSS: none COLOR: clear TDS: clear

WEATHER CONDITIONS: WIND: 15-25 DIRECTION: SW PRESS. TENDENCY: 0 OTHER: 0

SPECIFIC COMMENTS: _____

DATE OF FIELD SAMPLING: 6/3/14 BY: Thomas Bohler CHECKED BY: Thomas Bohler

PERMITS AND REGULATIONS MAY VARY BY REGION. PLEASE CONSULT WITH LOCAL AGENCIES FOR REGULATIONS.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56.546

Date: 5/22/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-4
 Measurement Point: TDR
 Constructed Well Depth (ft): 19'
 Measured Well Depth (ft): 21.42
 Depth of Sediment (ft): _____

Screen Length (ft): 9-19 = 10'
 Depth to Pump Intake (ft)⁽¹⁾: 17'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ml)⁽²⁾: 1 well vol. = 1.6 gal.
 Initial Depth to Water (ft): 11.62

Time	Pumping Rate (gpm/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
5/22 813		11.93		7.43	9.9	1.28	171.3	3.86	1.49	0	0
818		12.95		7.23	9.1	1.25	176.0	3.21	1.82	0.2	0
823		14.89		7.21	8.9	1.19	174.0	4.42	2.51	0.6	0
828		16.31		7.23	8.9	1.19	172.4	3.33	3.66	1.0	0
831	DRY	17.00		7.22	8.9	1.20	171.5	3.25	3.51	1.2	0
5/23 1530		11.97									
		↳ sampled									

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi^2 (D/2)^2 (5 \times 12) (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMCH BCPSite

WELL# MW-7-4

WELL PURGING INFORMATION

052214
PURCH DATE
(MM/YY)

052314
SAMPLE DATE
(MM/YY)

116
WATER VOL PURGING
(LITERS/GALLONS)

12
WATER VOL SAMPLED
(LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT TUBICATED (CIRCLE ONE)
SAMPLING EQUIPMENT TUBICATED (CIRCLE ONE)

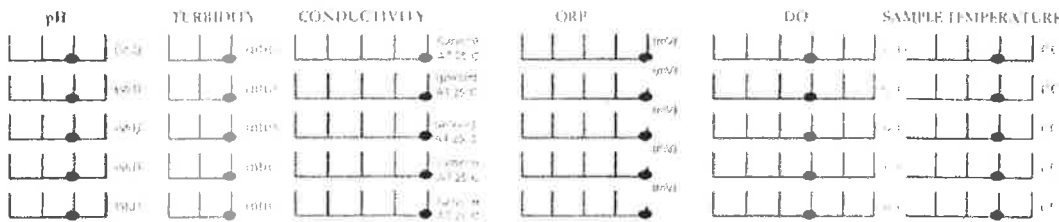
PURGING DEVICE	<input checked="" type="checkbox"/> B	1. AIR/WATER PUMP	2. HOPE PUMP	3. ROVER	X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	1. AIR/WATER PUMP	2. HOPE PUMP	3. ROVER	X	_____
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. AIR/WATER PUMP	2. HOPE PUMP	3. ROVER	X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. AIR/WATER PUMP	2. HOPE PUMP	3. ROVER	X	_____
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. AIR/WATER PUMP	2. HOPE PUMP	3. ROVER	X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. AIR/WATER PUMP	2. HOPE PUMP	3. ROVER	X	_____

FILTERING DEVICES 0-15 1. INTAKE SCREENS 2. PAPER 3. CARTRIDGE

FIELD MEASUREMENTS

WELL ELEVATION 593.53 (m/ft) GROUNDWATER ELEVATION 581.91 (m/ft)

DEPTH TO WATER 11.62 (m/ft) WELL DEPTH 12.142 (m/ft)



FIELD COMMENTS

SAMPLE CONDITION: Good WIND: 0-5 CLOUDS: none WIND DIRECTION: NE VISIBILITY: Clear WEATHER: Clear
 SPECIFIC COMMENTS: shows S forecast

DATE: 5/23/14 BY: Thomas Bohlen CHECKED BY: Thomas Bohlen

FOR MORE INFORMATION CONTACT THE STATE DEPARTMENT OF ENVIRONMENTAL QUALITY AT (360) 885-7000

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/27/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-5
 Measurement Point: TOR
 Constructed Well Depth (ft): 22
 Measured Well Depth (ft): 21.95
 Depth of Sediment (ft): _____

Screen Length (ft): 15-22
 Depth to Pump Intake (ft)⁽¹⁾: 18
 Well Diameter, D (in): 2
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 2.2 gal.
 Initial Depth to Water (ft): 8.42

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml) ⁽⁴⁾	No. of Well Screen Volumes Purged ⁽⁴⁾
1407		8.80		6.70	15.0	11.25	143.1	0.52	22.7	0	0
1430		9.27		6.67	15.7	11.73	124.3	0.17	11.1	0.2	0
1500		9.27		6.72	15.4	10.70	105.5	0.11	18.6	0.6	0
1530		9.27		6.69	15.0	11.59	99.0	0.09	8.77	1.1	0
1600		9.27		6.68	14.8	11.81	98.5	0.10	4.93	1.6	0
1615		9.27		6.68	14.6	11.90	98.2	0.07	4.28	1.9	0
1620		9.27		6.68	14.6	11.88	98.3	0.07	4.29	2.0	0
1625		9.27		6.68	14.6	11.87	98.2	0.07	4.15	2.1	0
1630		9.27		6.68	14.6	11.90	98.2	0.07	4.12	2.2	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12)^2 \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

0.1 ppm @ TOR

WELL PURGING FIELD INFORMATION FORM			JOB# <u>56546</u>		
SITE/PROJECT NAME: <u>GMCH BCP Site</u>			WELL# <u>MW-7-5</u>		
WELL PURGING INFORMATION					
PURGE DATE (MM/DD/YY): <u>05/27/14</u>		SAMPLE DATE (MM/DD/YY): <u>05/27/14</u>		WATER VOLUME USED (GALLONS): <u>22</u>	
PURGING AND SAMPLING EQUIPMENT		PURGING EQUIPMENT: <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> SHARED			
PURGING DEVICE: <input checked="" type="checkbox"/> B 5. JUMPSHOT PERM <input type="checkbox"/> 6. JUMPSHOT PERM <input type="checkbox"/> 7. JUMPSHOT PERM		SAMPLING EQUIPMENT: <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> SHARED			
PURGING DEVICE: <input checked="" type="checkbox"/> E 5. DIAPHRAGM <input type="checkbox"/> 6. STAINLESS STEEL <input type="checkbox"/> 7. POLYPROPYLENE		SAMPLING DEVICE: <input checked="" type="checkbox"/> B 1. JUMPSHOT PERM <input type="checkbox"/> 2. JUMPSHOT PERM <input type="checkbox"/> 3. JUMPSHOT PERM			
PURGING DEVICE: <input checked="" type="checkbox"/> E 5. DIAPHRAGM <input type="checkbox"/> 6. STAINLESS STEEL <input type="checkbox"/> 7. POLYPROPYLENE		SAMPLING DEVICE: <input checked="" type="checkbox"/> E 1. DIAPHRAGM <input type="checkbox"/> 2. POLYPROPYLENE <input type="checkbox"/> 3. POLYPROPYLENE			
FILTERING DEVICES 0.15 <input type="checkbox"/> 0.5 <input type="checkbox"/> 1.0 <input type="checkbox"/> 5.0 <input type="checkbox"/> 10 <input type="checkbox"/> 20 <input type="checkbox"/> 30 <input type="checkbox"/> 40 <input type="checkbox"/> 50 <input type="checkbox"/> 100 <input type="checkbox"/> 200 <input type="checkbox"/> 300 <input type="checkbox"/> 400 <input type="checkbox"/> 500 <input type="checkbox"/> 1000 <input type="checkbox"/> 2000 <input type="checkbox"/> 3000 <input type="checkbox"/> 4000 <input type="checkbox"/> 5000 <input type="checkbox"/> 10000 <input type="checkbox"/> 20000 <input type="checkbox"/> 30000 <input type="checkbox"/> 40000 <input type="checkbox"/> 50000 <input type="checkbox"/> 100000 <input type="checkbox"/> 200000 <input type="checkbox"/> 300000 <input type="checkbox"/> 400000 <input type="checkbox"/> 500000 <input type="checkbox"/> 1000000 <input type="checkbox"/> 2000000 <input type="checkbox"/> 3000000 <input type="checkbox"/> 4000000 <input type="checkbox"/> 5000000					
FIELD MEASUREMENTS					
WELL ELEVATION: <u>610.96</u> (ft)			GROUNDWATER ELEVATION: <u>602.54</u> (ft)		
DEPTH TO WATER: <u>8.42</u> (ft)			WELL DEPTH: <u>21.95</u> (ft)		
pH: <u>7.2</u>		TURBIDITY: <u>0.0</u> (ntu)		CONDUCTIVITY: <u>250</u> (µmhos/cm)	
ORP: <u>350</u> (mV)		DO: <u>8.5</u> (mg/L)		SAMPLE TEMPERATURE: <u>15</u> (°C)	
FIELD COMMENTS					
COMMENTS: <u>Good</u> <u>more</u> <u>Brown-Clear</u> <u>Clear</u>					
SPECIAL COMMENTS: <u>5-10</u> <u>SW</u> <u>0</u> <u>showers</u> <u>forecast</u>					
DATE: <u>5/27/14</u> NAME: <u>Thomas Bohlen</u> SIGNATURE: <u>Thomas Bohlen</u>					

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MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 58546

Date: 5/28/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-6
 Measurement Point: TDR
 Constructed Well Depth (ft): 16-9'
 Measured Well Depth (ft): 16.48'
 Depth of Sediment (ft): _____

Screen Length (ft): 9.9-16.9 = 7'
 Depth to Pump Intake (ft)⁽¹⁾: 13'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ft³)⁽²⁾: well vol. = 2.1 gallons
 Initial Depth to Water (ft): 3.85

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
1037		4.32		7.03	12.0	13.27	85.4	0.90	78.8	0	0
1100		4.32		6.97	12.1	12.99	40.9	0.23	17.2	0.2	0
1130		4.32		6.96	12.2	13.21	38.1	0.13	7.03	0.6	0
1200		4.32		6.96	12.1	13.25	35.9	0.10	4.83	1.1	0
1230		4.32		6.96	12.0	13.27	34.8	0.07	2.71	1.5	0
1250		4.32		6.96	12.1	13.26	33.6	0.08	1.56	1.9	0
1255		4.32		6.96	12.0	13.28	33.9	0.08	1.62	2.0	0
1300		4.32		6.96	12.0	13.27	34.3	0.08	1.58	2.1	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length, $V_s = \pi(D/2)^2(5 \cdot 12)(2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .

0.1 M @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM				JOB# <u>56546</u>	
SITE/PROJECT NAME: <u>6MCH BCLP site</u>				WELL# <u>MW-7-6</u>	
WELL PURGING INFORMATION					
PURGE DATE AMOUNT: <u>0.528114</u>		SAMPLE DATE VOLUME: <u>0.528114</u>		WATER VOL IN WELLS (TERRAGALLONS) <u>1211</u>	
				WATER VOL IN PIPES (TERRAGALLONS) <u>1211</u>	
PURGING AND SAMPLING EQUIPMENT					
PURGING EQUIPMENT			SAMPLING EQUIPMENT		
<input type="checkbox"/> AIRLIFT <input type="checkbox"/> PERMEABLE <input checked="" type="checkbox"/> DISBURSING			<input type="checkbox"/> DEDICATED <input checked="" type="checkbox"/> SHARED		
PURGING DEVICE	<input checked="" type="checkbox"/> B	1. BLINDER/SUCKER PUMP	2. CLASSIFIED PUMP	3. FILTER	4. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	1. BLINDER PUMP	2. FILTER	3. WATERLINE	4. OTHER (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. AIRLIFT	2. PERMEABLE	3. DISBURSING	4. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. PERMEABLE	2. FILTER	3. WATERLINE	4. OTHER (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. AIRLIFT	2. PERMEABLE	3. DISBURSING	4. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. PERMEABLE	2. FILTER	3. WATERLINE	4. OTHER (SPECIFY)
FILTERING DEVICES: <input type="checkbox"/> AIRLIFT <input type="checkbox"/> PERMEABLE <input type="checkbox"/> DISBURSING <input type="checkbox"/> OTHER					
FIELD MEASUREMENTS					
WELL ELEVATION: <u>160630</u> (feet)		GROUNDWATER ELEVATION: <u>160245</u> (feet)			
DEPTH TO WATER: <u>385</u> (feet)		WELL DEPTH: <u>1648</u> (feet)			
pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.0</u>	<u>0.1</u>	<u>150</u>	<u>150</u>	<u>2.0</u>	<u>15</u>
<u>7.0</u>	<u>0.1</u>	<u>150</u>	<u>150</u>	<u>2.0</u>	<u>15</u>
<u>7.0</u>	<u>0.1</u>	<u>150</u>	<u>150</u>	<u>2.0</u>	<u>15</u>
<u>7.0</u>	<u>0.1</u>	<u>150</u>	<u>150</u>	<u>2.0</u>	<u>15</u>
<u>7.0</u>	<u>0.1</u>	<u>150</u>	<u>150</u>	<u>2.0</u>	<u>15</u>
FIELD COMMENTS					
SAMPLE QUALITY: <u>Good</u>		TASTE: <u>none</u>		ODOR: <u>Clear</u>	
WELLHEAD CONDITION: <u>5-10</u>		WELL DEPTH: <u>SE</u>		PUMP OPERATION: <u>0</u>	
SPECIFIC COMMENTS:					
DATE: <u>5/28/14</u>		BY: <u>Thomas Bohlen</u>		CHECKED BY: <u>Thomas Bohlen</u>	

FIG. 10. FIELD PURGING AND SAMPLING INFORMATION FORM (REVISED BY A REVISED REQUEST FORM FROM THE BRUCKNER CENTER)

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BOP Site
 Ref. No.: 56546

Date: 5/29/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-7
 Measurement Point: TOR
 Constructed Well Depth (ft): 22.7
 Measured Well Depth (ft): 19.50'
 Depth of Sediment (ft): _____

Screen Length (ft): 12.7 - 22.7 = 10'
 Depth to Pump Intake (ft)⁽¹⁾: 15'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ft³)⁽²⁾: 1 well vol. = 2.7 gallons
 Initial Depth to Water (ft): 2.73

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
1217		2.98		11.37	12.3	1.03	65.0	3.97	23	0	0
1245		4.55		11.39	12.9	1.14	-4.6	2.65	98.5	0.2	0
1315		4.55		10.60	12.6	2.37	-102.9	1.59	31.4	0.8	0
1345		4.55		9.50	12.3	3.97	-160.1	1.02	15.1	1.1	0
1415		4.55		9.09	12.5	4.80	-182.4	0.61	8.06	1.6	0
1445		4.55		8.72	12.2	4.64	-208.1	0.38	6.41	2.1	0
1500		4.55		8.64	12.1	5.83	-216.9	0.31	5.12	2.2	0
1510		4.55		8.54	12.4	6.02	-226.9	0.25	5.02	2.3	0
1520		4.55		8.51	12.4	6.07	-227.7	0.21	5.01	2.6	0
1525		4.55		8.51	12.4	6.07	-226.6	0.22	4.93	2.7	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length, $V_s = \pi(D/2)^2(5 \times 12)(2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 WELL# MW-7-7

SITE/PROJECT NAME: GMCH BCP Site

PURGE DATE <u>10/29/14</u>	SAMPLED VS. DATE	WATER VOL. PURG. LITERS/GALLONS	WATER VOL. ANALYZED LITERS/GALLONS
<u>10/29/14</u>	<u>10/29/14</u>	<u>000027</u>	<u>000027</u>

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT	ITEM #	QTY	DESCRIPTION	SAMPLING EQUIPMENT	ITEM #	QTY	DESCRIPTION
PURGING DEVICE	<u>B</u>	1	A. COMPRESSIVE PUMP B. AIRLIFT PUMP	SAMPLING DEVICE	<u>B</u>	1	1. TUBING 2. SAMPLER 3. FILTERS
PURGING DEVICE	<u>E</u>	1	A. AIRLIFT PUMP B. PERMEABLE FILTER C. COMBINATION D. POLYPROPYLENE	SAMPLING DEVICE	<u>E</u>	1	1. PERMEABLE FILTER 2. COMBINATION 3. POLYPROPYLENE

FIELD MEASUREMENTS

WELL ELEVATION	<u>610.24</u>	(feet)	GROUNDWATER ELEVATION	<u>607.51</u>	(feet)
DEPTH TO WATER	<u>2.73</u>	(feet)	WELL DEPTH	<u>19.50</u>	(feet)
pH	_____	(pH)	TURBIDITY	_____	(ntu)
CONDUCTIVITY	_____	(umhos/cm)	ORP	_____	(mV)
DO	_____	(%)	SAMPLE TEMPERATURE	_____	(°C)

FIELD COMMENTS

WELL CONDITION: Good
 WEATHER CONDITIONS: 0-5
 OTHER COMMENTS: Solvent L. Brown → Clear
N

DATE: 5/29/14 NAME: Thomas Bohler SIGNATURE: Thomas Bohler

SYSTEM OPERATED AND SITE VISIT MONITORED BY ABBOTT LABORATORY FOR WATER QUALITY MANAGEMENT

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/28/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-8
 Measurement Point: TDR
 Constructed Well Depth (ft): 19.7
 Measured Well Depth (ft): 19.41
 Depth of Sediment (ft): _____

Screen Length (ft): 12.7-19.7'
 Depth to Pump Intake (ft)⁽¹⁾: 14'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 30 gal.
 Initial Depth to Water (ft): 1.21

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
9:30		1.52		7.85	12.5	10.23	-88.6	0.73	26.6	0	0
9:35		4.03		7.47	11.3	9.69	-107.7	0.32	26.0	0.3	0
9:40		7.35		7.16	11.6	8.51	-122.0	0.26	25.4	1.0	0
5/28 9:45		9.41		7.04	11.9	8.39	-118.7	0.25	21.3	1.3	0
9:50		10.84		6.92	12.6	8.29	-109.4	0.34	12.5	1.9	0
9:55		12.63		7.22	11.3	8.85	-141.8	0.26	1268	2.6	0
9:58	<u>Dry</u>	14.00		7.54	11.0	9.21	-150.0	0.32	2393	3.0	1
5/29 16:15		1.54									

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

OVM = 6.8 ppm peak @ TDR

WELL PURGING FIELD INFORMATION FORM

SITE/PROJECT NAME: 6MCH BCP Site

JOB# 56546 **WELL#** MW-7-8

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY): 10/5/14 SAMPLE DATE (MM/DD/YY): 10/5/14 WATER VOL. PURGING (GALLONS): 30 WATER VOL. SAMPLED (GALLONS): 30

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: PERC A FEET 0 (CABLE LINE) SAMPLING EQUIPMENT: DEDICATED 0 (CABLE LINE)

PURGING DEVICE	<input checked="" type="checkbox"/> B	3. RUBBER FOOT	4. STEEL FOOT	5. TUBER	X	6. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	3. RUBBER FOOT	4. STEEL FOOT	5. TUBER	X	6. OTHER (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL W.	2. STEEL W. WITH	3. STEEL W. WITH	X	4. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL W.	2. STEEL W. WITH	3. STEEL W. WITH	X	4. OTHER (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL W.	2. STEEL W. WITH	3. STEEL W. WITH	X	4. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL W.	2. STEEL W. WITH	3. STEEL W. WITH	X	4. OTHER (SPECIFY)

FILTERING DEVICES: A. IN THE GROUNDWATER B. PAPER C. VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 610.92 (ft) GROUNDWATER ELEVATION: 609.71 (ft)

DEPTH TO WATER: 1.21 (ft) WELL DEPTH: 19.41 (ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.2</u>	<u>0.0</u>	<u>125</u>	<u>150</u>	<u>0.0</u>	<u>50.0</u>
<u>7.2</u>	<u>0.0</u>	<u>125</u>	<u>150</u>	<u>0.0</u>	<u>50.0</u>
<u>7.2</u>	<u>0.0</u>	<u>125</u>	<u>150</u>	<u>0.0</u>	<u>50.0</u>
<u>7.2</u>	<u>0.0</u>	<u>125</u>	<u>150</u>	<u>0.0</u>	<u>50.0</u>
<u>7.2</u>	<u>0.0</u>	<u>125</u>	<u>150</u>	<u>0.0</u>	<u>50.0</u>

FIELD COMMENTS

SAMPLE COMMENTS: Good none Brown Cloudy

WELL COMMENTS: 0-5 SW 0

SPECIFIC COMMENTS:

DATE: 5/29/14 NAME: Thomas Bohler SIGNATURE: Thomas Bohler

FIGURE 10: OPERATIONAL SHEET FOR WELLS PURGED BY A REVISED REQUEST FORM APPROVED BY THE PROJECTAL MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCPSite
 Ref. No.: 56546

Date: 5/30/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-A-6
 Measurement Point: TOR*
 Constructed Well Depth (ft): 14.25
 Measured Well Depth (ft): 14.34
 Depth of Sediment (ft): _____

Screen Length (ft): _____
 Depth to Pump-Intake (ft)⁽¹⁾: 12'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 1.9 gallons
 Initial Depth to Water (ft): 2.75

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
930		2.90		6.85	13.9	3.47	25.7	0.60	11.67	0	0
1000		2.90		6.80	14.0	2.82	9.5	0.13	4.98	0.3	0
1030		2.90		6.80	13.9	2.40	-1.9	0.11	2.82	0.9	0
1100		2.90		6.80	14.1	2.56	-4.1	0.10	2.29	1.5	0
1110		2.90		6.80	14.1	2.62	-6.7	0.10	1.95	1.8	0
1115		2.90		6.80	14.1	2.61	-6.9	0.10	1.82	1.9	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi * (D/2)^2 * (5 * 12) * (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

* Riser up lifted above ground surface

0.0 ppm TOR - no cap

WELL PURGING FIELD INFORMATION FORM

JOB# 50546

SITE/PROJECT NAME: 6MCH RCP Site

WELL# MW-7A6

053014

PURGE DATE
(MM/DD/YY)

053014

SAMPLED TO
(M/D/YY)

1119

GATE VALVE USING
(1/1/YY)

1119

VALVE VOLUME USED
(GALLONS)

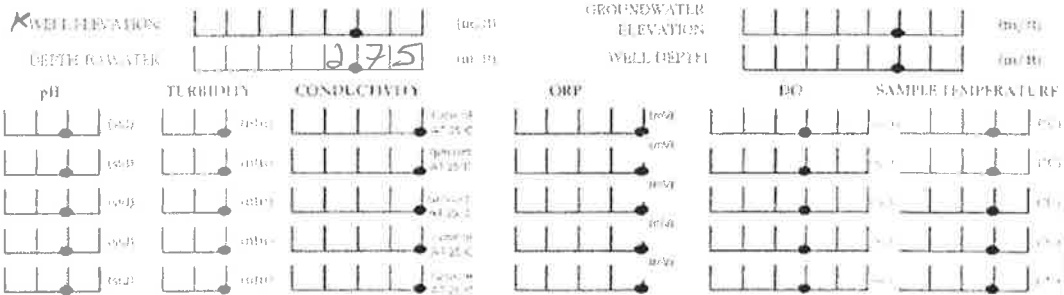
PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: PERMANENT SUBJECT ONLY
 SAMPLING EQUIPMENT: DEDICATED SHARED ONLY

PURGING DEVICE	<input checked="" type="checkbox"/> B	A. PERMANENT FEED	B. CASING PLUG	C. FILTER	X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	A. PERMANENT FEED	B. CASING PLUG	C. FILTER	X	_____
PURGING DEVICE	<input checked="" type="checkbox"/> E	A. PERMANENT FEED	B. CASING PLUG	C. FILTER	X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	A. PERMANENT FEED	B. CASING PLUG	C. FILTER	X	_____
PURGING DEVICE	<input checked="" type="checkbox"/> E	A. PERMANENT FEED	B. CASING PLUG	C. FILTER	X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	A. PERMANENT FEED	B. CASING PLUG	C. FILTER	X	_____

PURGING DEVICES: A. PERMANENT FEED B. CASING PLUG C. VACUUM

FIELD MEASUREMENTS



FIELD COMMENTS

WATER APPEARANCE: Good (T) none (O) Clear (S) Clear (C)

WELL CONDITION: D-5 (S) W (O) 0 (S) 0 (C)

SPECIFIC COMMENTS: _____

5/30/14 Thomas Bohlen Thomas Bohlen

* - riser uplifted above ground sur face

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCPSIVE
 Ref. No.: 58546

Date: 5/28/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-C-2
 Measurement Point: TDR
 Constructed Well Depth (ft): 24'
 Measured Well Depth (ft): 24.08
 Depth of Sediment (ft): _____

Screen Length (ft): _____
 Depth to Pump Intake (ft)⁽¹⁾: 21
 Well Diameter, D (in): 2
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 3.1 gallons
 Initial Depth to Water (ft): 3.14

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
1413		5.31		7.16	14.4	3.27	-1.8	0.87	23.1	0	0
1445		6.11		6.96	14.1	3.04	-27.6	0.13	18.4	0.3	0
1515		6.11		6.99	14.0	2.74	-53.0	0.08	10.85	0.8	0
1545		6.11		7.01	13.6	2.56	-65.8	0.07	9.13	1.3	0
1615		6.11		7.01	13.7	2.42	-73.7	0.06	8.00	1.9	0
1645		6.11		7.01	13.5	2.35	-78.0	0.04	7.48	2.3	0
1710		6.11		7.01	13.6	2.29	-78.8	0.04	5.93	2.8	0
1720		6.11		7.01	13.4	2.27	-81.1	0.04	5.87	2.9	0
1730		6.11		7.01	13.4	2.27	-82.0	0.04	5.85	3.0	0
1735		6.11		7.01	13.4	2.26	-82.3	0.04	5.81	3.1	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length, $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), $\text{No. of Well Screen Volumes Purged} = V_p / V_s$.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMCH BCP Site

WELL# MW-7-K-2

WELL PURGING INFORMATION

105218114
PURGE DATE
(MM/DD/YY)

105218114
SAMPLE NO. 1
(DATE-TIME)

11311
WATER QUALITY NO.
(WATER QUALITY)

11311
WELL NO. (WELL ID)
(WELL NO.)

PURGING AND SAMPLING EQUIPMENT

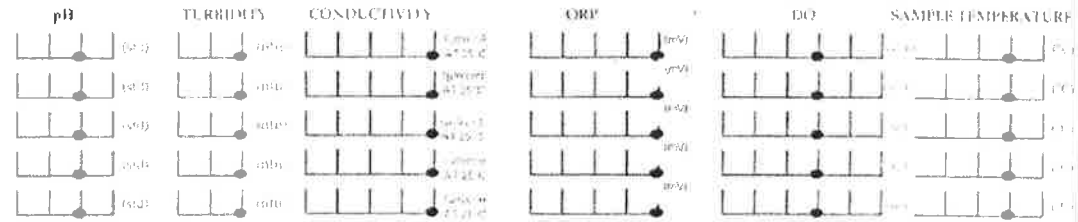
PURGING EQUIPMENT EXCLUDED INCLUDED
SAMPLING EQUIPMENT EXCLUDED INCLUDED

PURGING DEVICE	<u>B</u>	1. SUBMERSIBLE PUMP	2. DISCHARGE PUMP	3. HOLES	4. OTHER	<input checked="" type="checkbox"/>
SAMPLING DEVICE	<u>B</u>	1. SUBMERSIBLE PUMP	2. DISCHARGE PUMP	3. HOLES	4. OTHER	<input checked="" type="checkbox"/>
PURGING DEVICE	<u>E</u>	1. SHIMMERS	2. STAINLESS STEEL	3. POLYPROPYLENE	4. OTHER	<input checked="" type="checkbox"/>
SAMPLING DEVICE	<u>E</u>	1. SHIMMERS	2. STAINLESS STEEL	3. POLYPROPYLENE	4. OTHER	<input checked="" type="checkbox"/>
PURGING DEVICE	<u>E</u>	1. PERISTALTIC	2. PERISTALTIC	3. PERISTALTIC	4. OTHER	<input checked="" type="checkbox"/>
SAMPLING DEVICE	<u>E</u>	1. PERISTALTIC	2. PERISTALTIC	3. PERISTALTIC	4. OTHER	<input checked="" type="checkbox"/>

FILTERING DEVICES IS YES NO VACUUM

FIELD MEASUREMENTS

WELL ELEVATION 610.942 (m) GROUNDWATER ELEVATION 610.428 (m)
DEPTH TO WATER 5.114 (m) WELL DEPTH 24.08 (m)



FIELD COMMENTS

SAMPLE STATUS: Good (GOOD) None (NONE) Clear (CLEAR) Clear (CLEAR)
VELOCITY (M/S): 5-10 (VELOCITY) SW (TYPE) 0 (PRESSURE)

DATE/TIME: 5/28/14 NAME: Thomas Bohlen SIGNATURE: Thomas Bohlen

FORM 1 - BEE AIR QUALITY SYSTEMS, INC. MANUFACTURED BY ARVISON, REQUEST FORM APPROVED BY THE REGIONAL OFFICE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH RCP site
 Ref. No.: 56546

Date: 5/16/14
 Personnel: T. Bohler

Monitoring Well Data:

Well No.: MW-7-P-1
 Measurement Point: TOP
 Constructed Well Depth (ft): 20'
 Measured Well Depth (ft): 19.85'
 Depth of Sediment (ft): _____

Screen Length (ft): _____
 Depth to Pump Intake (ft)⁽¹⁾: 17'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 1.7 gal.
 Initial Depth to Water (ft): 9.50

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽⁴⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
907		9.75		6.21	20.3	25.10	-61.6	0.70	1.87	0	0
927		10.11		6.28	20.7	25.43	-108.3	0.22	2.51	0.2	0
947		10.27		6.28	20.7	25.50	-118.9	0.15	4.51	0.4	0
1007		10.43		6.28	20.7	25.49	-123.7	0.13	4.74	0.8	0
1027		10.53		6.27	20.8	24.60	-127.2	0.11	4.03	1.1	0
1037		10.59		6.26	20.7	23.60	-128.3	0.11	4.14	1.2	0
1047		10.65		6.25	20.7	22.65	-129.1	0.10	5.29	1.4	0
1052		10.68		6.25	20.7	22.30	-128.5	0.10	5.39	1.5	0
1057		10.71		6.24	20.7	22.19	-128.2	0.10	5.42	1.6	0
1102		10.73		6.24	20.7	22.13	-127.5	0.10	5.35	1.7	0

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi(D/2)^2(5 \times 12)(2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

OVM = 0.9 PAM TOR
 - chemical (?) odor observed during purging

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMU BCP Site

WELL # MW-7-P-1

PURGE DATE (MM/DD/YY) 05/16/14
 WELL PURGING INFORMATION
 SAMPLE DATE (MM/DD/YY) 05/16/14
 WATER VOL. DISCHG. (LITERS/GALLONS) 1.7
 ACTUAL VOLUME PURGED (LITERS/GALLONS) 1.7

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT	OPERATED <input checked="" type="radio"/> YES	OPERATED <input type="radio"/> NO	SAMPLING EQUIPMENT	OPERATED <input checked="" type="radio"/> YES	OPERATED <input type="radio"/> NO
	(CIRCLE ONE)			(CIRCLE ONE)	
PURGING DEVICE	<input checked="" type="checkbox"/> B	A. SLURGE SHEET PILE B. PERISTALTIC PUMP C. SLURRY PUMP	D. CASSETTE PUMP E. WATERWORKS	<input checked="" type="checkbox"/> X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	A. SLURRY PUMP B. FILTERED STRAINER	C. _____	<input checked="" type="checkbox"/> X	_____
PURGING DEVICE	<input checked="" type="checkbox"/> E	A. TROTON B. STAINLESS STEEL C. BENTONITE PILE	D. _____	<input checked="" type="checkbox"/> X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	A. BENTONITE PILE	B. _____	<input checked="" type="checkbox"/> X	_____
PURGING DEVICE	<input checked="" type="checkbox"/> E	A. TROTON B. _____	C. TROTON/STAINLESS D. TROTON/STAINLESS E. _____	<input checked="" type="checkbox"/> X	_____
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	A. TROTON B. _____	C. TROTON/STAINLESS D. TROTON/STAINLESS E. _____	<input checked="" type="checkbox"/> X	_____

FILTERING DEVICES ONLY: A. INTAKE FROM WELLS B. FINE SCREEN C. VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	<u>615.09</u> (m/ft)	GROUNDWATER ELEVATION	<u>605.57</u> (m/ft)
DEPTH TO WATER	<u>9.52</u> (m/ft)	WELL DEPTH	<u>19.85</u> (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.2</u>	<u>0.0</u>	<u>120</u>	<u>100</u>	<u>1.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>120</u>	<u>100</u>	<u>1.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>120</u>	<u>100</u>	<u>1.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>120</u>	<u>100</u>	<u>1.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>120</u>	<u>100</u>	<u>1.0</u>	<u>15.0</u>

SAMPLE APPEARANCE: Good Chemical Clear Clear
 WEATHER CONDITIONS: 0-5 sw 0 rain
 SPECIFIC COMMENTS: Indicating location

DATE OF FIELD SAMPLING: 5/16/14
 FIELD OPERATOR: Thomas Bohler
 SUPERVISOR: Thomas Bohler

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SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME GMCH BCP Site 9-30. PROJECT NO. 50546
 SAMPLING CREW MEMBERS T. Bohlen SUPERVISOR C. Boron
 DATE OF SAMPLE COLLECTION 5/14/14 - 6/2/14

[Note: For 2" dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-6-2-051414	MW-6-2	609.33	26.10	4.89	604.44	3.5	/	3.5	6.91	13.0	5.82	1350	VOC, MNA
MW-6-1-051414	MW-6-1	598.23	18.80	3.91	594.32	2.4	/	2.4	6.83	13.1	3.23	1700	VOC, MNA
MW-8-1-051514	MW-8-1	615.11	20.25	5.39	609.72	2.4	/	2.4	6.85	14.0	5.98	1540	VOC, MNA
MW-8-2-051614	MW-8-2	615.14	22.70	7.42	607.72	2.5	/	2.5	7.17	19.2	1.97	1450	VOC, MNA
MW-8-3-051614	MW-8-3	615.06	22.01	8.40	606.66	2.2	/	2.5	6.80	20.4	6.50	1650	VOC, MNA
MW-8-003B-052914	MW-8-003B	610.94	14.35	4.65	606.29	1.6	/	2.0	8.08	12.8	3.40	1600	VOC, MNA
MW-6-F-8-053014	MW-6-F-8	613.22	14.33	8.01	605.21	1.0	/	1.2	6.61	13.1	11.73	845	VOC, MNA
MW-8-4-060214	MW-8-4	613.42	21.39	8.91	604.51	2.0	/	2.0	7.23	15.9	11.89	1125	VOC, MNA

Additional Comments:

Copies to:

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SAC
 Ref. No.: 52546

Date: 5/14/14
 Personnel: T. Bohler

Monitoring Well Data:

Well No.: MW-6-1
 Measurement Point: TDR
 Constructed Well Depth (ft): 17'
 Measured Well Depth (ft): 18.8'
 Depth of Sediment (ft): _____

Screen Length (ft): 7-17'
 Depth to Pump Intake (ft)⁽¹⁾: 15'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ml)⁽²⁾: 1 well vol. = 2.4 gal.
 Initial Depth to Water (ft): 3.91

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml.)	No. of Well Screen Volumes Purged ⁽⁴⁾
1442		4.18		6.80	14.4	3.16	-84.4	0.31	40	0	0
1500		4.18		6.82	13.5	3.13	-89.0	0.13	65.1	0.2	0
1530		4.18		6.82	13.4	3.17	-84.9	0.08	39.1	0.7	0
1550		4.18		6.82	12.9	3.19	-79.1	0.08	31.3	1.1	0
1610		4.18		6.82	12.7	3.21	-83.0	0.06	21.9	1.3	0
1630		4.18		6.83	13.0	3.20	-83.8	0.05	17.2	1.8	0
1640		4.18		6.83	13.1	3.21	-83.6	0.05	15.9	2.0	0
1645		4.18		6.83	13.2	3.21	-81.7	0.04	15.7	2.1	0
1650		4.18		6.83	13.1	3.23	-81.6	0.04	15.5	2.2	0
1655		4.18		6.83	13.0	3.22	-81.7	0.04	15.2	2.3	0
1700		4.18		6.83	13.1	3.23	-81.6	0.04	15.1	2.4	1

Emptied Flow through cell

Notes:

- The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- The well screen volume will be based on a 5-foot screen length. $V_s = \pi(D/2)^2(5 \times 12) \times (2.54)^3$
- The drawdown from the initial water level should not exceed 0.3 ft.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

DUM = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

SITE/PROJECT NAME: GMCH BCP Site

JOB# 56546

WELL# MW-6-11

10/5/14

DATE (MM/DD/YY)

05/19/14

SAMPLE DATE (MM/DD/YY)

2.4

WATER VOL. IN CASING (LITERS/GALLONS)

2.4

ACTUAL VOLUME PURGED (GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT	DEDICATED <input checked="" type="radio"/> N	SHARING EQUIPMENT <input type="radio"/> Y		SAMPLING EQUIPMENT	DEDICATED <input checked="" type="radio"/> N	SHARING EQUIPMENT <input type="radio"/> Y	
PURGING DEVICE	<input checked="" type="checkbox"/> B	A - SLURRY/SHEEP PUMP	D - AIR LIFT PUMP	C - PAIL	X -	OTHER (SEE SPECIFIC)	
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	B - PERISTALTIC PUMP	E - PERISTALTIC PUMP	H - WATER SAM	X -	OTHER (SEE SPECIFIC)	
PURGING DEVICE	<input checked="" type="checkbox"/> E	A - STEEL	D - STEEL	C - PAIL	X -	OTHER (SEE SPECIFIC)	
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	B - STAINLESS STEEL	E - POLYETHYLENE	H - WATER SAM	X -	OTHER (SEE SPECIFIC)	
PURGING DEVICE	<input checked="" type="checkbox"/> E	A - TEFロン	D - POLYETHYLENE	F - SILICONE	X -	OTHER (SEE SPECIFIC)	
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	B - TEFロン	E - POLYETHYLENE	G - COMBINATION	X -	OTHER (SEE SPECIFIC)	
FILTERING DEVICES (U)	<input type="checkbox"/> A - INTAKE DRAINAGE	<input type="checkbox"/> B - DRAIN OFF	<input type="checkbox"/> C - VACUUM				

FIELD MEASUREMENTS

WELL ELEVATION	<u>598.23</u>	(m/ft)	GROUNDWATER ELEVATION	<u>594.32</u>	(m/ft)						
DEPTH TO WATER	<u>3.91</u>	(m/ft)	WELL DEPTH	<u>18.80</u>	(m/ft)						
pH	<u>7.0</u>	TURBIDITY	<u>0.0</u>	CONDUCTIVITY	<u>150</u>	ORP	<u>150</u>	DO	<u>8.0</u>	SAMPLE TEMPERATURE	<u>15.0</u>

FIELD COMMENTS

SAMPLE APPARATUS: Good (TYPE) None (TYPE) Br -> Clear (COLOR) Cloudy -> Clear (COLOR)

WEATHER CONDITIONS: 05 (WIND) NE (DIRECTION) 0 (PRECIPITATION) pm clear (TIME)

SPECIFIC COMMENTS:

DATE: 5/14/14 NAME: Thomas Bohler SIGNATURE: Thomas Bohler

FORM OPERATOR'S USE ONLY. RE-USE COMPANY BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/14/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-6-2
 Measurement Point: TDR
 Constructed Well Depth (ft): 24.6
 Measured Well Depth (ft): 26.10
 Depth of Sediment (ft): _____

Screen Length (ft): 14.6 - 24.6'
 Depth to Pump Intake (ft)⁽¹⁾: 19'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ml)⁽²⁾: 1 well vol. = 3.5 gal
 Initial Depth to Water (ft): 4.89

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
1130		4.98		7.10	12.2	5.68	198.8	1.86	1.20	0	0
1150		4.98		7.05	12.0	5.62	186.6	1.17	1.41	0.3	0
1210		4.98		7.04	12.2	5.60	161.4	1.00	1.79	0.8	0
1230		4.98		7.00	12.1	5.65	141.0	0.79	1.85	1.3	0
1250		4.98		6.92	13.0	5.77	91.1	0.15	3.19	1.9	0
1310		4.98		6.92	13.2	5.79	68.0	0.11	3.43	2.4	0
1330		4.98		6.91	13.0	5.82	59.0	0.08	3.94	2.9	0
1340		4.98		6.91	12.9	5.83	56.8	0.08	3.72	3.1	0
1345		4.98		6.91	13.0	5.82	55.2	0.10	3.71	3.3	0
1350		4.98		6.91	13.0	5.82	54.8	0.10	3.88	3.5	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length, $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p / V_s .

WELL PURGING FIELD INFORMATION FORM

SITE/PROJECT NAME: 6MCH BCP Site

JOB# 56546

WELL# MW-6-2

WELL PURGING INFORMATION

05/14/14

PURGE DATE
(MM/DD/YY)

05/14/14

SAMPLE DATE
(MM/DD/YY)

3.5

WATER VOL IN AS STG
(LITERS/GALLONS)

3.5

ACTUAL VOL PURGED
(LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED YES (CIRCLE ONE) SAMPLING EQUIPMENT DEDICATED NO (CIRCLE ONE)

PURGING DEVICE B SLURRY/SURF PUMP D LAY OFF PUMP S SURFACE X- D FLOWMETER (NO. 10)

SAMPLING DEVICE B F FLOWMETER E FLOWMETER G WAREHOUSE X- SAMPLE CONTAINER (NO. 10)

PURGING DEVICE E A THERM B THERM C THERM X- D FLOWMETER (NO. 10)

SAMPLING DEVICE E A THERM B THERM C THERM X- D FLOWMETER (NO. 10)

PURGING DEVICE E A THERM B THERM C THERM X- D FLOWMETER (NO. 10)

SAMPLING DEVICE E A THERM B THERM C THERM X- D FLOWMETER (NO. 10)

FILTERING DEVICES A IN LINE B PRESSURE C VALVE

FIELD MEASUREMENTS

WELL ELEVATION 6109.33 (m) GROUNDWATER ELEVATION 6104.44 (m)

DEPTH TO WATER 4.89 (m) WELL DEPTH 26.10 (m)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.2</u>	<u>0.0</u>	<u>475.0</u>	<u>100</u>	<u>0.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>475.0</u>	<u>100</u>	<u>0.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>475.0</u>	<u>100</u>	<u>0.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>475.0</u>	<u>100</u>	<u>0.0</u>	<u>15.0</u>
<u>7.2</u>	<u>0.0</u>	<u>475.0</u>	<u>100</u>	<u>0.0</u>	<u>15.0</u>

FIELD COMMENTS

WIND DIRECTION: Good WIND SPEED: 0-5 SW CLOUDS: clear MOON: clear

SPECIFIC COMMENTS: _____

DATE: 5/14/14 SIGNATURE: Thomas Bohler

FOR MORE INFORMATION, PLEASE CONTACT THE PROJECT MANAGER AT THE PROJECT SITE.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/30/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-6-F-8
 Measurement Point: TOR
 Constructed Well Depth (ft): 15.4
 Measured Well Depth (ft): 14.33
 Depth of Sediment (ft): _____

Screen Length (ft): 8-15.4
 Depth to Pump Intake (ft)⁽¹⁾: 12'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 1 gal.
 Initial Depth to Water (ft): 8.01

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
8:02		8.13		6.67	13.3	11.36	158.7	0.79	12.2	0	0
8:10		8.13		6.61	13.2	11.40	148.7	0.33	10.43	0.2	0
8:15		8.13		6.61	13.2	11.43	141.2	0.35	6.12	0.3	0
8:20		8.13		6.61	13.1	11.51	121.8	0.32	5.66	0.4	0
8:25		8.13		6.61	13.0	11.61	105.8	0.26	5.53	0.5	0
8:30		8.13		6.61	13.0	11.65	92.6	0.24	4.75	0.7	0
8:35		8.13		6.61	13.1	11.68	81.9	0.18	4.63	0.9	0
8:40		8.13		6.61	13.1	11.71	76.2	0.17	4.51	1.0	1
8:45		8.13		6.61	13.1	11.73	75.7	0.16	4.32	1.2	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 3-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (3 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

8VM @ Road box = 2.4 ppm - petroleum odor / Sheen on purged road box water

8VM @ TOR = 9.4 ppm peak

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: 6MCH BCP Site

WELL# MW6-F8

WELL PURGING INFORMATION
 PURGE DATE (MM/DY/YY): 05/30/14 SAMPLE NO. (DATE): 053014 WATER VOL. PURGING (LITERS/GALLONS): 110 WATER VOL. SAMPLED (LITERS/GALLONS): 112

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT: PERMEAMETER AIRLIFT OTHER (CIRCLE ONE)
 SAMPLING EQUIPMENT: DIRECT THROUGH PERMEAMETER (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/> B	1. AIRLIFT PERMEAMETER	2. PERMEAMETER	3. WATERBAG	N	PERMEAMETER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	1. AIRLIFT PERMEAMETER	2. PERMEAMETER	3. WATERBAG	N	SAMPLING DEVICE (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. AIRLIFT PERMEAMETER	2. PERMEAMETER	3. WATERBAG	N	PERMEAMETER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. AIRLIFT PERMEAMETER	2. PERMEAMETER	3. WATERBAG	N	SAMPLING DEVICE (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. AIRLIFT PERMEAMETER	2. PERMEAMETER	3. WATERBAG	X	PERMEAMETER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. AIRLIFT PERMEAMETER	2. PERMEAMETER	3. WATERBAG	N	SAMPLING DEVICE (SPECIFY)

FILTERING DEVICES: A. DEEPER ORGANIC B. OTHER C. VALUUM

FIELD MEASUREMENTS

WELL ELEVATION: 613.22 (m) GROUNDWATER ELEVATION: 605.21 (m)
 DEPTH TO WATER: 8.01 (m) WELL DEPTH: 14.33 (m)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.2</u>	<u>0.1</u>	<u>120</u>	<u>150</u>	<u>1.5</u>	<u>15.0</u>
<u>7.2</u>	<u>0.1</u>	<u>120</u>	<u>150</u>	<u>1.5</u>	<u>15.0</u>
<u>7.2</u>	<u>0.1</u>	<u>120</u>	<u>150</u>	<u>1.5</u>	<u>15.0</u>
<u>7.2</u>	<u>0.1</u>	<u>120</u>	<u>150</u>	<u>1.5</u>	<u>15.0</u>
<u>7.2</u>	<u>0.1</u>	<u>120</u>	<u>150</u>	<u>1.5</u>	<u>15.0</u>

FIELD COMMENTS

SAMPLE RECEIVED: Good COLOR: none TASTE: Clear TASTE: Clear
 OBSERVED: 0-5 TDS: W PRECIPITATION: 0

SPECIFIC COMMENTS

DATE: 5/30/14 NAME: Thomas Bohler SIGNATURE: Thomas Bohler

FORM 101-101 (REV. 10/01) MUST BE COMPLETED BY A PERSON QUALIFIED TO USE THIS FORM AS DIRECTED BY THE PROJECT MANAGER.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SRE
 Ref. No.: 56546

Date: 5/15/14
 Personnel: T. Bohler

Monitoring Well Data:

Well No.: MW-8-1
 Measurement Point: TDR
 Constructed Well Depth (ft): 22.5
 Measured Well Depth (ft): 20.25
 Depth of Sediment (ft): _____

Screen Length (ft): 15.5-22.5
 Depth to Pump Intake (ft)⁽¹⁾: 17'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ft³)⁽²⁾: 1 well vol. = 2.4 gal.
 Initial Depth to Water (ft): 5.39

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml/gal)	No. of Well Screen Volumes Purged ⁽⁴⁾
1325		5.50		6.76	14.2	5.91	-21.5	0.37	3.01	0	0
1345		5.78		6.84	13.8	5.97	-180.1	0.11	2.89	0.3	0
1405		5.80		6.86	13.9	5.99	-217.5	0.09	2.65	0.6	0
1425		5.88		6.88	13.9	5.99	-266.3	0.08	2.57	1.0	0
1445		5.90		6.87	13.9	5.98	-288.0	0.07	2.41	1.3	0
1505		5.92		6.86	13.9	5.97	-294.0	0.08	2.55	1.8	0
1515		5.94		6.86	14.0	5.98	-297.3	0.07	2.62	1.9	0
1525		5.94		6.85	14.0	5.98	-300.6	0.07	2.65	2.1	0
1530		5.94		6.85	14.0	5.98	-301.7	0.07	2.55	2.2	0
1535		5.94		6.85	14.0	5.98	-301.9	0.07	2.61	2.3	0
1540		5.94		6.85	14.0	5.98	-302.5	0.07	2.59	2.4	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 3-foot screen length. $V_s = \pi(D/2)^2(5 \times 12)(2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

*OVM @ TDR = 0.0 ppm
 - strong sulfur odor*

WELL PURGING FIELD INFORMATION FORM

JOB# 576546

SITE/PROJECT NAME: GMCH BCP Site

WELL# MW-8-11

WELL PURGING INFORMATION
 PURGE DATE (MM/DD/YY) 05/15/14 SAMPLE DATE (MM/DD/YY) 05/15/14 WATER VOLUME (GALLONS) 24 AIR FLOW (GALLONS) 24

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT DEDICATED? YES (CIRCLE ONE) SAMPLING EQUIPMENT DEDICATED? YES (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/> B	A - SURFACE PUMP	D - GAS-LIFT PUMP	L - FAUCET	X
		B - PERISTALTIC TUBE	E - ROCKET PUMP	Q - WATERBAY	
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	C - READY TAP	F - DIPPER BOTTLE		X
PURGING DEVICE	<input checked="" type="checkbox"/> E	G - DRAIN	H - PUMP		X
		I - STAPLE WHEEL	J - VALVE/THERM		X
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	K - POINT/PORT TAP			X
PURGING DEVICE	<input checked="" type="checkbox"/> E	N - TUBION	O - TONG/COMBINEE	P - SURLINE	X
		Q - BARGE	R - TONG/THERM	S - COMBINATION	X
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	T - BARGE	U - TONG/POLYPROPYLENE		X

FILTERING DEVICES (0.5) A - FINE MESH NET B - SCREEN C - VALVE

FIELD MEASUREMENTS

WELL ELEVATION 615.11 (ft) GROUNDWATER ELEVATION 609.72 (ft)

DEPTH TO WATER 5.39 (ft) WELL DEPTH 20.25 (ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.0</u>	<u>0.0</u>	<u>47.25</u>	<u>0.0</u>	<u>0.0</u>	<u>60.0</u>
<u>7.0</u>	<u>0.0</u>	<u>47.25</u>	<u>0.0</u>	<u>0.0</u>	<u>60.0</u>
<u>7.0</u>	<u>0.0</u>	<u>47.25</u>	<u>0.0</u>	<u>0.0</u>	<u>60.0</u>
<u>7.0</u>	<u>0.0</u>	<u>47.25</u>	<u>0.0</u>	<u>0.0</u>	<u>60.0</u>
<u>7.0</u>	<u>0.0</u>	<u>47.25</u>	<u>0.0</u>	<u>0.0</u>	<u>60.0</u>

FIELD COMMENTS

SAMPLE APPEARANCE Good TASTE Sulfur COLOR Clear ODOUR Clear

WEATHER/CONDITION 0-5 WIND DIRECTION SW WIND VELOCITY 0 COMMENTS to storms - PM

SPECIFIC COMMENTS Interior location

DATE 5/15/14 NAME Thomas Bohlen SIGNATURE Thomas Bohlen

EMERGENCY CONTACTS MUST BE ACCOMPANIED BY ADDRESS ON REQUEST FORM ATTACHED TO THIS PROJECT MANUAL.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: EMCH BCP Site
 Ref. No.: 56546

Date: 5/16/14
 Personnel: T. Bohler

Monitoring Well Data:

Well No.: MW-8-2
 Measurement Point: TOR
 Constructed Well Depth (ft): 23.0
 Measured Well Depth (ft): 22.70
 Depth of Sediment (ft): _____

Screen Length (ft): 7
 Depth to Pump Intake (ft)⁽¹⁾: 19
 Well Diameter, D (in): 2
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 2.5 gal.
 Initial Depth to Water (ft): 7.42

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
1228		7.70		7.61	19.1	2.47	-33.6	0.85	5.56	0	0
1258		8.66		7.46	19.2	2.11	-15.6	0.17	2.17	0.4	0
1318		8.84		7.42	19.2	2.06	-56.6	0.11	2.25	0.8	0
1340		8.85		7.22	19.2	1.92	-138.0	0.09	2.20	1.2	0
1400		8.85		7.20	19.2	1.91	-171.4	0.07	2.12	1.8	0
1410		8.85		7.19	19.2	1.92	-181.8	0.07	1.85	1.9	0
1420		8.85		7.18	19.2	1.92	-192.4	0.07	1.70	2.1	0
1430		8.85		7.17	19.2	1.92	-202.4	0.07	1.67	2.2	0
1440		8.85		7.15	19.2	1.94	-212.9	0.06	1.20	2.3	0
1445		8.85		7.17	19.2	1.97	-217.8	0.06	1.23	2.4	0
1450		8.85		7.17	19.2	1.97	-218.1	0.06	1.17	2.5	0

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi(D/2)^2(5 \times 12)(2.54)$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

OVM @ TOR = 2.7 ppm
 strong sulfur odor from
 purge water

WELL PURGING FIELD INFORMATION FORM

JOB# 5765416

SITE/PROJECT NAME: GMCH BCP Site

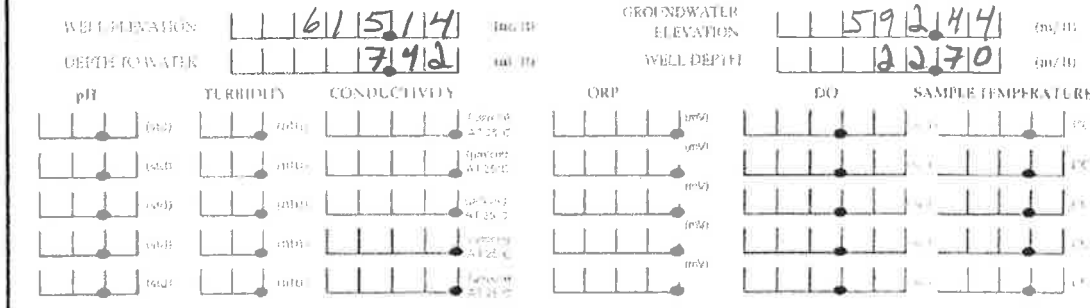
WELL# MW-8-2

WELL PURGING INFORMATION
 PURGE DATE (MM/DD/YY): 05/16/14 SAMPLE DATE (MM/DD/YY): 05/16/14 WATER VOL. IN (GAL) (APPROXIMATE): 2.5 WATER VOL. OUT (GAL) (APPROXIMATE): 2.5

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT: PERCAFE OTHER (CIRCLE ONE) SAMPLING EQUIPMENT: DEDICATED OTHER (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/> B	1. ALUMINUM PUMP	2. 1/2" HOLES	3. 1/2" HOLES	4. 1/2" HOLES	5. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	1. ALUMINUM PUMP	2. 1/2" HOLES	3. 1/2" HOLES	4. 1/2" HOLES	5. OTHER (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. STAINLESS STEEL	2. 1/2" HOLES	3. 1/2" HOLES	4. 1/2" HOLES	5. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. STAINLESS STEEL	2. 1/2" HOLES	3. 1/2" HOLES	4. 1/2" HOLES	5. OTHER (SPECIFY)
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. TITANIUM	2. POLYETHYLENE	3. SILICONE	4. COMBINATION	5. OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. TITANIUM	2. POLYETHYLENE	3. SILICONE	4. COMBINATION	5. OTHER (SPECIFY)

FILTERING DEVICES 0.15 A. INTAKE DEVICES B. OTHER C. VACUUM



FIELD COMMENTS

WATER APPEARANCE: Good TASTE: Sulfur COLOR: Yellow TURBIDITY: Clear

WEATHER CONDITIONS: 0-5 WIND DIRECTION: SW PRECIPITATION: 0 OTHER: rain

DATE: 5/16/14 NAME: Thomas Bohler SIGNATURE: Thomas Bohler

FORM REVISIONS MUST BE APPROVED BY A REGIONAL REGIONAL SUPERVISOR BEFORE USE BY THE PROJECT SITE WORK

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/15/14
 Personnel: T. Bahlan

Monitoring Well Data:

Well No.: MW-8-3
 Measurement Point: TOR
 Constructed Well Depth (ft): 22.4
 Measured Well Depth (ft): 22.01
 Depth of Sediment (ft): _____

Screen Length (ft): 7'
 Depth to Pump Intake (ft)⁽¹⁾: 19'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 2.2 gal.
 Initial Depth to Water (ft): 8.40

5/15

Time	Pumping Rate (gal/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (gal)	No. of Well Screen Volumes Purged ⁽⁴⁾
16:20		8.68		7.08	20.5	8.17	-136.1	1.82	1.62	0	0
16:25		10.73		8.27	20.3	8.25	-179.1	1.23	1.57	0.5	0
16:30		12.86		7.08	20.2	6.54	-92.0	2.94	1.35	0.8	0
16:35		13.82		6.99	20.2	6.52	-83.3	2.65	1.28	1.4	0
16:40		16.05		6.94	20.2	6.51	-80.3	2.57	1.35	1.8	0
16:45		17.54		6.90	20.3	6.50	-76.5	2.52	1.26	2.2	1
16:50		19.08		6.80	20.4	6.50	-75.1	2.51	1.32	2.5	1
16:52	Arg	19.12									
15:35		8.87	- sample								

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi^2 (D/2)^2 (5 \times 12) (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p / V_s .

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMCH BLP Site

WELL# MW-8-3

10/5/15/14

FIELD DATE (MM/DD/YY)

10/5/16/14

SAMPLE DATE (MM/DD/YY)

1111

WATER VOL. ESTIMATED (LITERS/GALLONS)

215

ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT	DEBRATED (Y/N)	SAMPLING EQUIPMENT	DEBRATED (Y/N)
(CHECK ONE)	(CHECK ONE)	(CHECK ONE)	(CHECK ONE)
PURGING DEVICE: <u>B</u> A - GUMMER SITE PUMP		D - EXHAUST PUMP	X
B - POSITIVE DISPLACEMENT PUMP		E - PERISTALTIC PUMP	
SAMPLING DEVICE: <u>B</u> C - GUMMER PUMP		F - FILTER BOTTLE	X
		G - BAG FILTER	
PURGING DEVICE: <u>E</u> S - THERMOS		H - TUB	X
R - STAINLESS STEEL		I - TUB WITH LID	
SAMPLING DEVICE: <u>E</u> J - POSITIVE DISPLACEMENT PUMP			X
		K - BAG FILTER	
PURGING DEVICE: <u>E</u> S - THERMOS		L - POSITIVE DISPLACEMENT PUMP	X
S - THERMOS		M - TUB	
SAMPLING DEVICE: <u>E</u> P - THERMOS		N - TUB WITH LID	X
		O - COMBINATION THERMOS/POSITIVE DISPLACEMENT PUMP	
			X

FILTERING DEVICES (Y/N) A - INLINE DISINFECTANT B - PAPER FILTER C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	<u>1615.06</u> (m)	GROUNDWATER ELEVATION	<u>1616.66</u> (m)		
DEPTH TO WATER	<u>18.40</u> (m)	WELL DEPTH	<u>22.01</u> (m)		
pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
14.0	1000	10000	100V	10.0	10.0
14.0	1000	10000	100V	10.0	10.0
14.0	1000	10000	100V	10.0	10.0
14.0	1000	10000	100V	10.0	10.0
14.0	1000	10000	100V	10.0	10.0

FIELD COMMENTS

SAMPLE APPEARANCE: Good COLOR: none TASTE: Clear ODOR: Clear

WEATHER CONDITIONS: WINDSPEED: 0-5 DIRECTION: SW PRECIPITATION: 0 CLOUD COVER: rain

SPECIAL COMMENTS: Interior location

DATE OF FIELD SAMPLING: 5/16/14 FIELD OFFICER: Thomas Bohler SUPERVISOR: Thomas Bohler

FIGURE IDENTIFICATION MUST BE ACCOMPANIED BY A REVISION REQUEST FORM ATTACHED TO THE PROJECT MANUAL

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No: 56546

Date: 6/2/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-8-4
 Measurement Point: TDR
 Constructed Well Depth (ft): 21.8
 Measured Well Depth (ft): 21.39
 Depth of Sediment (ft): _____

Screen Length (ft): 14.8 - 21.8 = 7'
 Depth to Pump Intake (ft)⁽¹⁾: 18'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 2.0 gallons
 Initial Depth to Water (ft): 8.91

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
9:29		9.21		7.53	15.3	4.88	-114.6	0.57	17.5	0	0
10:00		10.11		7.21	16.0	5.13	-128.7	0.10	7.71	0.2	0
10:30		10.11		7.23	16.0	8.74	-120.3	0.07	4.38	0.9	0
11:00		10.11		7.24	15.9	10.71	-121.6	0.08	4.70	1.3	0
11:15		10.11		7.23	15.9	11.55	-123.5	0.06	3.27	1.7	0
11:20		10.11		7.23	15.9	11.88	-122.2	0.07	3.21	1.9	0
11:25		10.11		7.23	15.9	11.89	-122.0	0.06	3.20	2.0	1

Notes:

- The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- The well screen volume will be based on a 5-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- The drawdown from the initial water level should not exceed 0.3 ft.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

0 VM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMLH BCP Site

WELL# MW-8-4

WELL PURGING INFORMATION

10/6/10
PURGE DATE
(MM/DD/YY)

10/6/10
SAMPLE DATE
(MM/DD/YY)

120
WATER VOL. PURGING
(GALLONS)

120
WATER VOL. SAMPLED
(GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: 0 (CIRCLED) SAMPLING EQUIPMENT: 0 (CIRCLED)

PURGING DEVICE	<u>B</u>	1. SUBMERSED PUMP	2. SURFACE PUMP	3. TABLE	4. OTHER
SAMPLING DEVICE	<u>B</u>	1. SUBMERSED PUMP	2. SURFACE PUMP	3. TABLE	4. OTHER
PURGING DEVICE	<u>E</u>	1. SURFACE PUMP	2. SUBMERSED PUMP	3. TABLE	4. OTHER
SAMPLING DEVICE	<u>E</u>	1. SURFACE PUMP	2. SUBMERSED PUMP	3. TABLE	4. OTHER
PURGING DEVICE	<u>E</u>	1. SURFACE PUMP	2. SUBMERSED PUMP	3. TABLE	4. OTHER
SAMPLING DEVICE	<u>E</u>	1. SURFACE PUMP	2. SUBMERSED PUMP	3. TABLE	4. OTHER

FIELD MEASUREMENTS

WELL ELEVATION	<u>1613.42</u>	(feet)	GROUNDWATER ELEVATION	<u>1610.45</u>	(feet)
DEPTH TO WATER	<u>8.91</u>	(feet)	WELL DEPTH	<u>21.39</u>	(feet)
pH	<u>7.0</u>	(feet)	ORP	<u>100</u>	(feet)
TURBIDITY	<u>0.0</u>	(feet)	DO	<u>8.0</u>	(feet)
CONDUCTIVITY	<u>120</u>	(feet)	SAMPLE TEMPERATURE	<u>15.0</u>	(feet)

FIELD COMMENTS

SAMPLE QUALITY: Good None Clear Clear
 WEATHER/CLIMATE: 5-10 SW 0 AM showers forecast
 SPECIFIC COMMENTS: _____

6/2/14 Thomas Bohlen Thomas Bohlen

FORM REPEATS AND SIZE OF MEASUREMENTS BY A REVIEWER, REQUEST FOR REVISIONS BY THE PROJECT SUPERVISOR

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/29/14
 Personnel: T. Bohler

Monitoring Well Data:

Well No.: MW-8-003B
 Measurement Point: TDR
 Constructed Well Depth (ft): 15'
 Measured Well Depth (ft): 14.35'
 Depth of Sediment (ft): _____

Screen Length (ft): _____
 Depth to Pump Intake (ft)⁽¹⁾: 12'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 1.6 gallons
 Initial Depth to Water (ft): 4.65

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
10:15		4.76		8.30	12.9	1.25	74.8	4.24	14.9	0	0
10:45		4.76		8.16	12.8	2.01	100.4	2.12	23.0	0.8	0
10:50		4.76		8.13	12.8	2.32	106.8	2.02	19.3	0.9	0
11:05		4.76		8.09	12.8	3.03	118.0	1.68	15.3	1.3	0
11:10		4.76		8.08	12.8	3.35	122.3	1.54	15.1	1.6	1
11:15		4.76		8.08	12.8	3.38	121.8	1.55	14.5	1.8	1
11:20		4.76		8.08	12.8	3.40	123.4	1.54	14.2	2.0	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi(D/2)^2(5 \times 12)(2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s .

ovm @ TDR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 576546

SITE/PROJECT NAME: GMCH BCP Site

WELL# MW-8-003-B

WELL PURGING INFORMATION

052914

PURGE DATE
(MM/DD/YY)

052914

SAMPLE DATE
(MM/DD/YY)

116

WATER VOL. PURGED
(LITERS/GALLONS)

20

WELL VOL. PURGED
(LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT	PERMANENT <input type="checkbox"/>	RELOCATABLE <input checked="" type="checkbox"/>	SAMPLING EQUIPMENT	DEDICATED <input checked="" type="checkbox"/>	SHARED <input type="checkbox"/>
PURGING DEVICE	<u>B</u>	1. SUBMERGIBLE PUMP 2. SURFACE PUMP	1. SURFACE PLUMB 2. WATERBAY	NO	1. GROUNDWATER SPECIFIC
SAMPLING DEVICE	<u>B</u>	1. SUBMERGIBLE PUMP	1. DIRECT RIGGING	NO	1. GROUNDWATER SPECIFIC
PURGING DEVICE	<u>E</u>	1. SURFACE 2. SURFACE PUMP	1. SURFACE PLUMB 2. DIRECT RIGGING	NO	1. GROUNDWATER SPECIFIC
SAMPLING DEVICE	<u>E</u>	1. DIRECT RIGGING	1. DIRECT RIGGING	NO	1. GROUNDWATER SPECIFIC
PURGING DEVICE	<u>E</u>	1. SURFACE 2. SURFACE PUMP	1. SURFACE PLUMB 2. COMBINATION	NO	1. GROUNDWATER SPECIFIC
SAMPLING DEVICE	<u>E</u>	1. DIRECT RIGGING	1. DIRECT RIGGING 2. COMBINATION	NO	1. GROUNDWATER SPECIFIC

FIELD MEASUREMENTS

WELL ELEVATION	<u>6110.94</u> (m/ft)	GROUNDWATER ELEVATION	<u>6062.9</u> (m/ft)		
DEPTH G.W. WATER	<u>46.5</u> (m/ft)	WELL DEPTH	<u>14.35</u> (m/ft)		
pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.0</u>	<u>0.1</u>	<u>150</u>	<u>100</u>	<u>1.0</u>	<u>15.0</u>

FIELD COMMENTS

SAMPLE QUALITY: Good None Clear Clear

WELL COMMENTS: 0-5 E 0

SPECIFIC COMMENTS:

5/29/14 Thomas Bohler Thomas Bohler

FORM PREPARED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY. REVISION REQUEST FORM ATTACHED BY THE PROJECT MANAGER.

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME GMCH BCP Site

SAMPLING CREW MEMBERS T. Bohlen

DATE OF SAMPLE COLLECTION 5/21/14 - 6/13/14

PROJECT NO. 56546

SUPERVISOR C. Baron

[Note: For 2" dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-9-12-052114	MW-9-12	614.92	15.40	5.76	609.16	1.6	/	1.7	7.09	12.0	4.02	1210	VOC, MNA
MW-9-101A-052114	MW-9-101A	615.00	12.54	4.92	610.08	1.2	/	1.9	7.11	13.1	7.11	928	VOC, MNA
MW-10-3-052214	MW-10-3	610.40	15.39	3.05	607.35	2.0	/	2.0	7.71	11.7	0.84	1220	VOC, MNA
MW-10-2-052214	MW-10-2	611.26	16.06	2.90	608.36	2.1	/	2.2	7.02	13.0	6.56	1505	VOC, MNA
TK-6-060214	TK-6	621.69	13.20	9.13	612.56	2.7	/	2.7	7.25	16.9	4.38	1550	VOC, MNA
BLDG-10-MW-1-060314	BLDG-10-MW-1	615.05	15.53	5.61	609.44	1.6	/	1.6	6.75	19.7	2.25	1045	VOC, MNA
							/						
							/						

Additional Comments: _____

Copies to: _____

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

WELL PURGING FIELD INFORMATION FORM
 SITE/PROJECT NAME: GMCH BCP Site JOB# 56546
 WELL# MW-9-101-A

WELL PURGING INFORMATION
 PURGING DATE: 01/22/14 SAMPLE DATE: 01/22/14 WATER COLUMN (ft): 11.2 GROUNDWATER DEPTH (ft): 11.9

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT: 1 (B) 1 (E) 1 (E) 1 (E)
 SAMPLING EQUIPMENT: 1 (B) 1 (E) 1 (E) 1 (E)
 FILTERING DEVICES: 1 (A) 1 (B) 1 (C) 1 (D)

FIELD MEASUREMENTS
 WELL ELEVATION: 615.00 GROUNDWATER ELEVATION: 610.08
 DEPTH TO WATER: 4.92 WELL DEPTH: 11.54
 pH: 7.0 TURBIDITY: 0.0 CONDUCTIVITY: 125.0 ORP: 150 DO: 0.0 SAMPLE TEMPERATURE: 10.0

FIELD COMMENTS
 (AMBIENT) Good (TURBIDITY) none (ORP) Clear (DO) Clear
 (SAMPLING) 0-5 (WELL DEPTH) W (PUMPING) 0
 SPECIFIC COMMENTS: showers, variances

DATE: 5/22/14 NAME: Thomas Bohler SIGNATURE: Thomas Bohler

FORM NO. 100-100-001 (REV. 10/01) PREPARED BY: GRS/SON/BOH/LSI/FORM 100-100-001 FOR USE BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/2/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-9-12
 Measurement Point: TDR
 Constructed Well Depth (ft): 15.43
 Measured Well Depth (ft): 15.40
 Depth of Sediment (ft): _____

Screen Length (ft): _____
 Depth to Pump Intake (ft)⁽¹⁾: 11'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (mL)⁽²⁾: 1 well vol. = 1.6 gal.
 Initial Depth to Water (ft): 5.76

Time	Pumping Rate (g/L/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
1035		5.87		7.20	12.4	3.77	163.7	0.80	39.5	0	0
1100		5.94		7.10	12.1	4.09	95.6	0.24	17.6	0.3	0
1134		5.94		7.09	12.0	4.03	7.7	0.18	12.3	0.9	0
1150		5.94		7.09	12.1	4.00	-23.1	0.15	11.7	1.2	0
1155		5.94		7.09	12.0	4.00	-31.4	0.14	12.13	1.3	0
1200		5.94		7.09	12.0	4.02	-37.4	0.14	12.05	1.5	0
1205		5.94		7.09	12.0	4.02	-38.2	0.14	11.6	1.6	1
1210		5.94		7.09	12.0	4.02	-38.5	0.14	11.8	1.7	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi * (D/2)^2 * (5 * 12) * (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 6MLH BCP Site
 Ref. No.: 56546

Date: 6/3/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: BLDG-10-MW-1
 Measurement Point: TDR
 Constructed Well Depth (ft): 16.0
 Measured Well Depth (ft): 15.53
 Depth of Sediment (ft): _____

Screen Length (ft): 11-16 = 5'
 Depth to Pump Intake (ft)⁽¹⁾: 13'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (gal)⁽²⁾: 1 well vol. = 1.6 gallons
 Initial Depth to Water (ft): 5.61

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
9:00		5.85		6.75	19.8	2.26	-5.8	0.67	1.45	0	0
9:30		6.35		6.75	19.7	2.25	-44.0	0.17	1.21	0.3	0
9:50		6.35		6.75	19.7	2.24	-46.1	0.20	1.25	0.8	0
10:10		6.35		6.75	19.7	2.25	-42.0	0.23	1.81	1.0	0
10:30		6.35		6.75	19.7	2.24	-46.7	0.17	1.67	1.3	0
10:35		6.35		6.75	19.7	2.24	-46.8	0.17	1.51	1.4	0
10:40		6.35		6.75	19.8	2.24	-47.2	0.18	1.45	1.5	0
10:45		6.35		6.75	19.7	2.25	-47.3	0.18	1.43	1.6	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .

DUPLICATE TOR = 25.9 ppm peak

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: GMCH RCP Site WELL# BLDG-10-MW-1

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY): 10/6/10 13/1/14 SAMPLE DATE (MM/DD/YY): 10/6/10 13/1/14

WATER VOL INFUSING (LITERS/GALLONS): WATER VOL EMPTING (LITERS/GALLONS):

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT (CHECK ONE) PERK & WELLS (CIRCLE ONE) SAMPLING EQUIPMENT (CIRCLE ONE) LABORATORY (CIRCLE ONE)

PURGING DEVICE	<u>B</u> 1. SUBMERSED	<u>B</u> 2. SURFACE	<u>B</u> 3. SHALLOW	<u>B</u> 4. DEEP	<u>B</u> 5. OTHER
SAMPLING DEVICE	<u>B</u> 1. SUBMERSED	<u>B</u> 2. SURFACE	<u>B</u> 3. SHALLOW	<u>B</u> 4. DEEP	<u>B</u> 5. OTHER

FILTERING DEVICES 0.45 A. IN LINE DISINFECTANT B. PRESSURE C. VALUCLAM

FIELD MEASUREMENTS

WELL ELEVATION: 615.05 (m/ft) GROUNDWATER ELEVATION: 1609.44 (m/ft)

DEPTH TO WATER: 1561 (m/ft) WELL DEPTH: 1553 (m/ft)

pH: TURBIDITY: CONDUCTIVITY: ORP: DO: SAMPLE TEMPERATURE:

FIELD COMMENTS

SAMPLE REPRESENTATIVE: Good SOLVENT: Solvent CLEAR: Clear WEATHER CONDITIONS: D-5 SW: SW PPT: 0 SPECIFIC COMMENTS: Interior location

6/3/14 Thomas Bohlen Thomas Bohlen

FORM 100 (REV. 10/01) USE BY ALL PERSONNEL. A REVISION REQUEST FORM AT THE BOTTOM OF THE PROJECT SHEET.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site
 Ref. No.: 56546

Date: 5/22/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-10-2
 Measurement Point: TDR
 Constructed Well Depth (ft): 16.80
 Measured Well Depth (ft): 16.06
 Depth of Sediment (ft): _____

Screen Length (ft): 9.8-16.8 = 7'
 Depth to Pump Intake (ft)⁽¹⁾: 14'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ft³): 1 well vol. = 2.1 gallons
 Initial Depth to Water (ft): 2.90

Time	Pumping Rate (gpl/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽²⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽³⁾
1330		5.13		7.80	14.0	12.18	-133.5	0.48	21.1	0	0
1400		5.18		7.10	12.8	6.94	-72.4	0.15	10.83	0.7	0
1430		5.18		7.03	13.1	6.65	-61.9	0.12	7.12	1.2	0
1445		5.18		7.02	13.1	6.61	-66.7	0.09	5.14	1.7	0
1455		5.18		7.02	13.1	6.57	-65.1	0.08	3.78	2.0	0
1500		5.18		7.02	13.0	6.56	-67.2	0.08	3.75	2.1	1
1505		5.18		7.02	13.0	6.56	-67.5	0.08	3.72	2.2	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi (D/2)^2 (5 \times 12) (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

OVM = 0.0 @ TOR

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: 6MCH BCPS/6

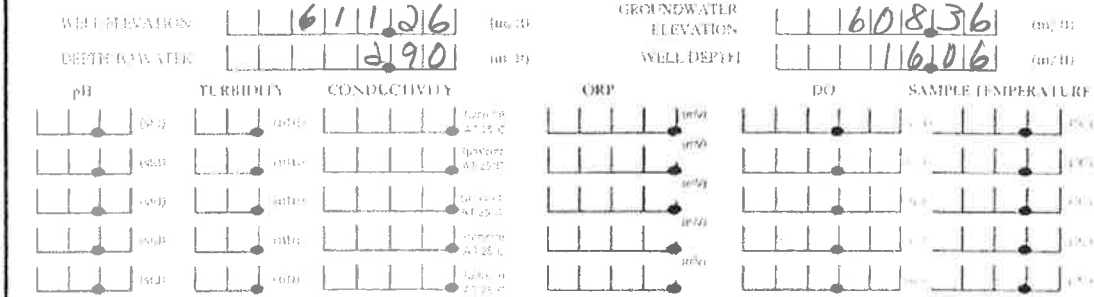
WELL# MW-10+2

WELL PURGING INFORMATION
 PURGE DATE (MM/DD/YY): 10/5/2014 SAMPLE DATE (MM/DD/YY): 10/5/2014 WATER VOL. DISCHARGED (LITERS/GALLONS): 11 ACQUATIC ANIMALS (YES/NO): 0

PURGING AND SAMPLING EQUIPMENT
 PURGING EQUIPMENT (CIRCLE ONE): B SAMPLING EQUIPMENT (CIRCLE ONE): B

PURGING DEVICE	<u>B</u>	1. SUBMERGED PERISTALTIC PUMP	2. DISC FILTER	3. FAN	4. WATER TRAP	5. FILTERED WATER SPECIMEN
SAMPLING DEVICE	<u>B</u>	1. SUBMERGED PERISTALTIC PUMP	2. DISC FILTER	3. FAN	4. WATER TRAP	5. FILTERED WATER SPECIMEN
PURGING DEVICE	<u>E</u>	1. DISC FILTER	2. DISC FILTER	3. FAN	4. WATER TRAP	5. FILTERED WATER SPECIMEN
SAMPLING DEVICE	<u>E</u>	1. DISC FILTER	2. DISC FILTER	3. FAN	4. WATER TRAP	5. FILTERED WATER SPECIMEN
PURGING DEVICE	<u>E</u>	1. DISC FILTER	2. DISC FILTER	3. FAN	4. WATER TRAP	5. FILTERED WATER SPECIMEN
SAMPLING DEVICE	<u>E</u>	1. DISC FILTER	2. DISC FILTER	3. FAN	4. WATER TRAP	5. FILTERED WATER SPECIMEN

FILTERING DEVICES (CIRCLE ONE): A B C



FIELD COMMENTS

SAMPLE RECEIVED: Good none Clear Clear

RESIDUAL OIL: 0-5 SW 0 ppm showers

DATE: 5/22/14 SIGNATURE: Thomas Bohler SIGNATURE: Thomas Bohler

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: SMCH BCP Site
 Ref. No.: 50546

Date: 5/22/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-10-3
 Measurement Point: TOP
 Constructed Well Depth (ft): 15.80
 Measured Well Depth (ft): 15.35
 Depth of Sediment (ft): _____

Screen Length (ft): 8.8-15.8 = 7'
 Depth to Pump Intake (ft)⁽¹⁾: 13'
 Well Diameter, D (in): 2"
 Well Screen Volume, V_s (ml)⁽²⁾: 1 well vol. = 2.0 gallons
 Initial Depth to Water (ft): 3.05

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (ml)	No. of Well Screen Volumes Purged ⁽⁴⁾
10:15		3.30		7.96	12.0	1.22	155.8	0.84	2.18	0	0
10:45		4.01		7.71	11.3	1.11	140.4	0.35	1.89	0.3	0
11:15		4.01		7.72	11.3	1.02	126.8	1.42	1.26	0.8	0
11:45		4.01		7.71	11.7	0.90	120.5	1.62	1.63	1.2	0
12:00		4.01		7.71	11.7	0.86	117.4	1.70	1.47	1.6	0
12:05		4.01		7.71	11.7	0.85	116.8	1.75	1.43	1.7	0
12:10		4.01		7.71	11.7	0.84	116.7	1.74	1.41	1.8	0
12:15		4.01		7.71	11.7	0.84	116.5	1.73	1.40	1.9	0
12:20		4.01		7.71	11.7	0.84	116.3	1.75	1.47	2.0	0

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = \pi * (D/2)^2 * (5 * 12) * (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: GMCH BCP Site WELL# MW-10-3

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY): 10/5/14 SAMPLE DATE (MM/DD/YY): 10/5/14 WATER VOL PURGED (LITERS/GALLONS): 60 WELL RET. IMP. (FEET): 20

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: PERVAPEL OTHER (CIRCLE ONE)

SAMPLING EQUIPMENT: DEERATED OTHER (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/> A	3. ALUMINUM PERMEABLE	4. SAND/SILT PUMP	5. FILTER	6. OTHER
SAMPLING DEVICE	<input checked="" type="checkbox"/> B	1. STEEL PERMEABLE	2. POLYPROPYLENE	3. WATERWELL	4. OTHER
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL PERMEABLE	2. SAND/SILT PUMP	3. FILTER	4. OTHER
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL PERMEABLE	2. POLYPROPYLENE	3. WATERWELL	4. OTHER
PURGING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL PERMEABLE	2. SAND/SILT PUMP	3. FILTER	4. OTHER
SAMPLING DEVICE	<input checked="" type="checkbox"/> E	1. STEEL PERMEABLE	2. POLYPROPYLENE	3. WATERWELL	4. OTHER

FILTERING DEVICES: 1. INTERFERENCE FILTER 2. PAPER FILTER 3. VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 1610.40 (m/ft) GROUNDWATER ELEVATION: 1607.35 (m/ft)

DEPTH TO WATER: 30.5 (m/ft) WELL DEPTH: 115.35 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.0</u>	<u>0.5</u>	<u>275</u>	<u>100</u>	<u>0.5</u>	<u>15</u>
<u>7.0</u>	<u>0.5</u>	<u>275</u>	<u>100</u>	<u>0.5</u>	<u>15</u>
<u>7.0</u>	<u>0.5</u>	<u>275</u>	<u>100</u>	<u>0.5</u>	<u>15</u>
<u>7.0</u>	<u>0.5</u>	<u>275</u>	<u>100</u>	<u>0.5</u>	<u>15</u>
<u>7.0</u>	<u>0.5</u>	<u>275</u>	<u>100</u>	<u>0.5</u>	<u>15</u>

FIELD COMMENTS

SAMPLE APP. STATUS: Good NO. OF PURGES: 1-5 WEATHER: W COMMENTS: Clear showers forecasted

5/20/14 Thomas Bohlen Thomas Bohlen

FORM NO. 100-10-01 (REV. 10/01) PREPARED BY ARIAN SOLOMONS, ARIAN CONSULTING, INC. (ACI) FOR THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: SMCH BCP Site
 Ref. No.: SB 546

Date: 6/2/14
 Personnel: T. Bohlen

Monitoring Well Data:

Well No.: TK-6
 Measurement Point: TDR
 Constructed Well Depth (ft): _____
 Measured Well Depth (ft): 13.20
 Depth of Sediment (ft): _____

Screen Length (ft): _____
 Depth to Pump Intake (ft)⁽¹⁾: 12'
 Well Diameter, D (in): 4"
 Well Screen Volume, V_s (ft³)⁽²⁾: Well vol. = 2.7 gallons
 Initial Depth to Water (ft): 9.13

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
1233		9.21		7.31	14.9	4.22	109.0	3.47	6.01	0	0
1300		9.21		7.25	17.5	4.12	103.3	3.12	3.22	0.3	0
1330		9.21		7.23	18.1	4.28	104.1	2.63	2.83	0.8	0
1400		9.21		7.24	18.1	4.42	105.4	2.53	4.09	1.2	0
1435		9.21		7.25	17.8	4.39	109.5	2.57	3.68	1.8	0
1500		9.21		7.25	17.5	4.38	110.7	2.46	2.95	2.1	0
1530		9.21		7.25	17.0	4.37	118.0	2.24	2.83	2.5	0
1540		9.21		7.25	16.9	4.38	118.2	2.32	2.71	2.6	0
1550		9.21		7.25	16.9	4.38	118.9	2.35	2.70	2.7	1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 3-foot screen length. $V_s = \pi \cdot (D/2)^2 \cdot (3 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p / V_s.

OUM = 0.0ppm @ TDR

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 WELL# TK-6

SITE/PROJECT NAME: GMCH BCP Site

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY) 06/02/14 SAMPLE DATE (MM/DD/YY) 06/02/14 WATER VOL. IN/PMG. (LITERS/GALLONS) 10.7 WELL WATER DEPTH (FEET/CM) 10.7

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT (CIRCLE ONE) 0 SAMPLING EQUIPMENT (CIRCLE ONE) 0

PURGING DEVICE: B 1. AIR LIFT DEVICE 2. SURFACE PUMP 3. WHEEL 4. OTHER _____

SAMPLING DEVICE: B 1. DIRECTLY FROM WELL 2. THROUGH PIPE 3. OTHER _____

PURGING DEVICE: E 1. WATER JET 2. OTHER _____

SAMPLING DEVICE: E 1. DIRECTLY FROM WELL 2. THROUGH PIPE 3. OTHER _____

PURGING DEVICE: E 1. PERMANENT 2. PORTABLE PUMP 3. BUBBLER 4. OTHER _____

SAMPLING DEVICE: E 1. PERMANENT 2. PORTABLE PUMP 3. COMBINATION 4. OTHER _____

FILTERING DEVICES: 0 1. NONE 2. INTAKE RESPONSIBLE 3. DEGREE OF _____ 4. VARIOUS _____

FIELD MEASUREMENTS

WELL ELEVATION 1621.69 ft. GROUNDWATER ELEVATION 1612.56 ft.

DEPTH TO WATER 9.13 ft. WELL DEPTH 13.20 ft.

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
<u>7.2</u>	<u>0.0</u>	<u>250</u> µmho/cm	<u>250</u> mV	<u>2.0</u> mg/L	<u>20.0</u> °C
<u>7.2</u>	<u>0.0</u>	<u>250</u> µmho/cm	<u>250</u> mV	<u>2.0</u> mg/L	<u>20.0</u> °C
<u>7.2</u>	<u>0.0</u>	<u>250</u> µmho/cm	<u>250</u> mV	<u>2.0</u> mg/L	<u>20.0</u> °C
<u>7.2</u>	<u>0.0</u>	<u>250</u> µmho/cm	<u>250</u> mV	<u>2.0</u> mg/L	<u>20.0</u> °C
<u>7.2</u>	<u>0.0</u>	<u>250</u> µmho/cm	<u>250</u> mV	<u>2.0</u> mg/L	<u>20.0</u> °C

FIELD COMMENTS

WELL CAPABILITY: Good OTHER: None WATER: Clear WIND: Clear

WEATHER/CONDITION: 5-10 FUTURE USE: SW OTHER: 0

SPECIFIC COMMENTS: Am Shoggers are casted

DATE: 6/2/14 SIGNATURE: Thomas Bohlen SIGNATURE: Thomas Bohlen

FIGURE 10.13. SAMPLE COLLECTION AND MEASUREMENTS FOR A WELLS. REQUEST FORM AT: <http://www.doh.wa.gov> FOR A COPY OF THE PROJECT MANUAL.

APPENDIX B
PREVIOUS ANALYTICAL RESULTS

MW-7-1R Groundwater Data

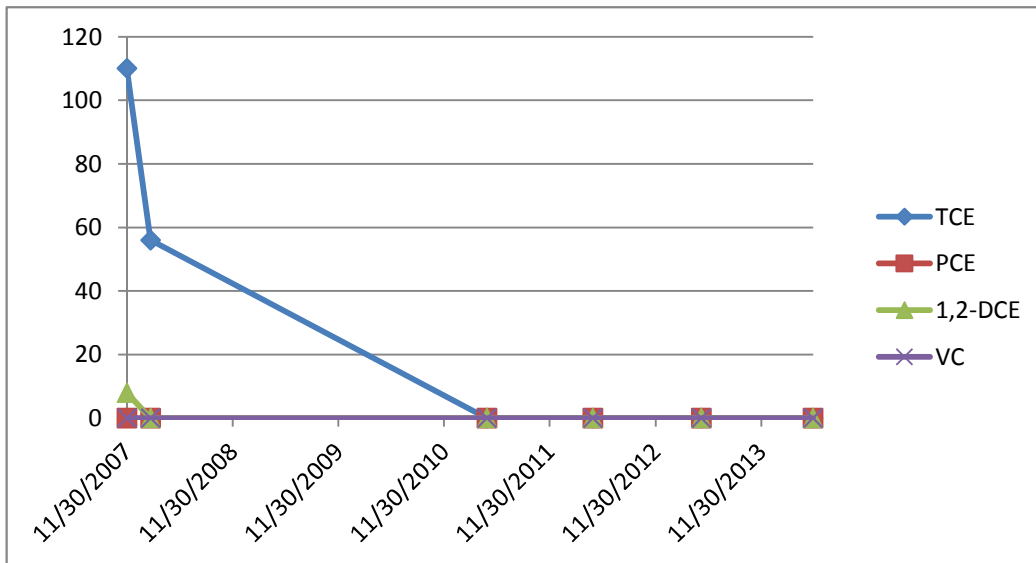
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/30/2007	110	<	8	<
2/20/2008	56	<	<	<
4/27/2011	<	<	<	<
4/27/2012	<	<	<	<
5/6/2013	<	<	<	<
5/27/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-2 Groundwater Data

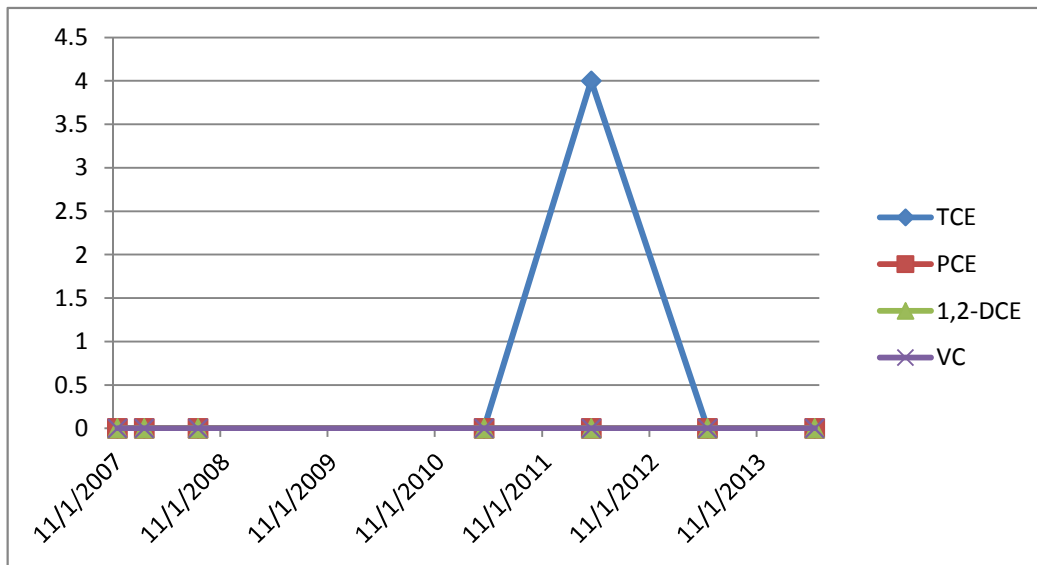
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/29/2007	<	<	<	<
2/20/2008	<	<	<	<
8/8/2008	<	<	<	<
4/27/2011	<	<	<	<
4/26/2012	4	<	<	<
5/6/2013	<	<	<	<
5/23/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-3 Groundwater Data

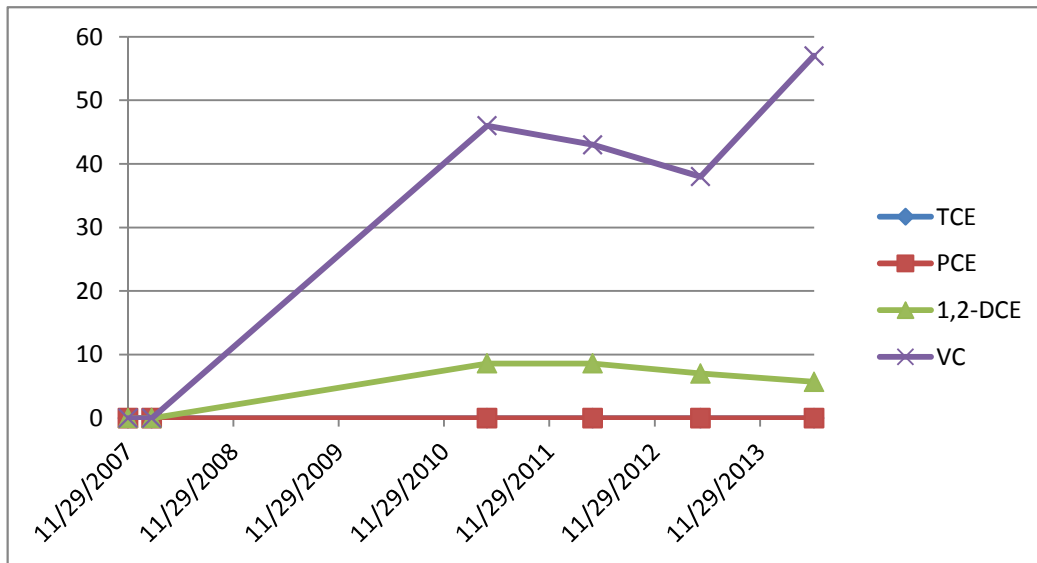
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/29/2007	<	<	<	<
2/20/2008	<	<	<	<
4/27/2011	<	<	8.6	46
4/27/2012	<	<	8.6	43
5/6/2013	<	<	7	38
6/3/2014	<	<	5.7	57

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-4 Groundwater Data

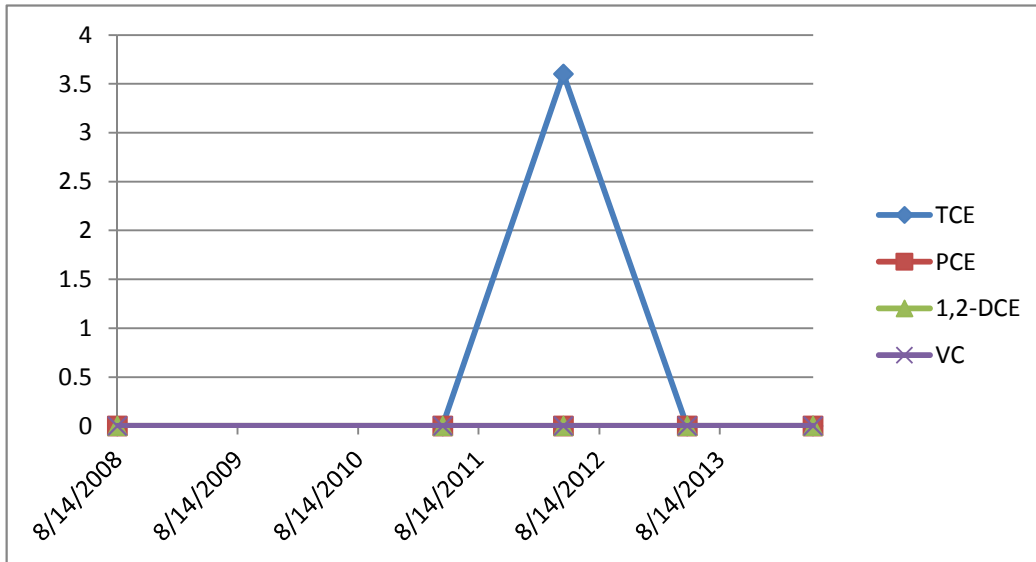
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/14/2008	<	<	<	<
4/27/2011	<	<	<	<
4/27/2012	3.6	<	<	<
5/7/2013	<	<	<	<
5/23/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-5 Groundwater Data

GM Components Holdings, LLC
Lockport, New York

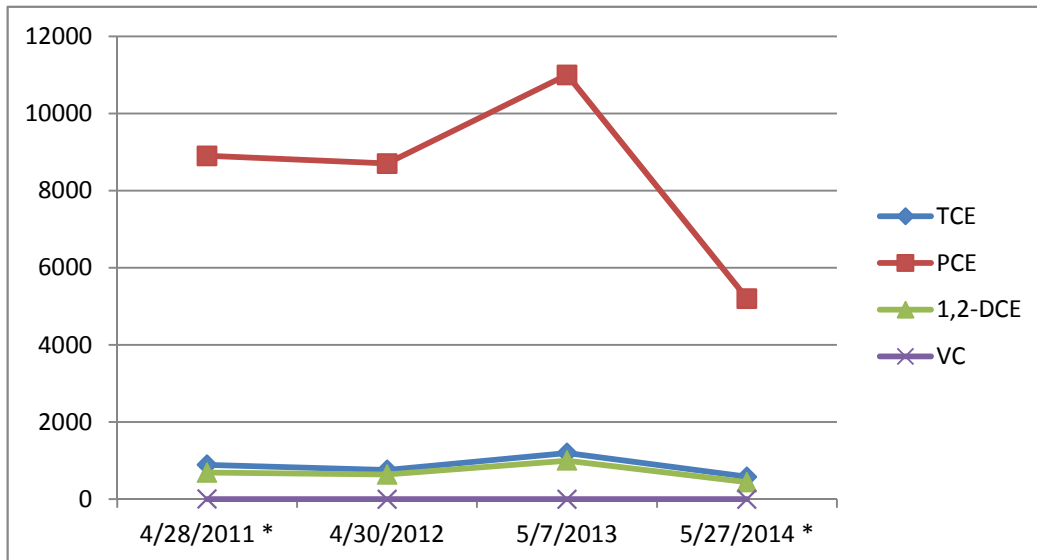
Date	TCE	PCE	1,2-DCE	VC
4/28/2011 *	890	8,900	687	5.8
4/30/2012	760	8,700	640	<
5/7/2013	1,200	11,000	1,000	<
5/27/2014 *	580	5200	440	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result

* = results are the higher of the sample or its respective duplicate sample.



MW-7-6 Groundwater Data

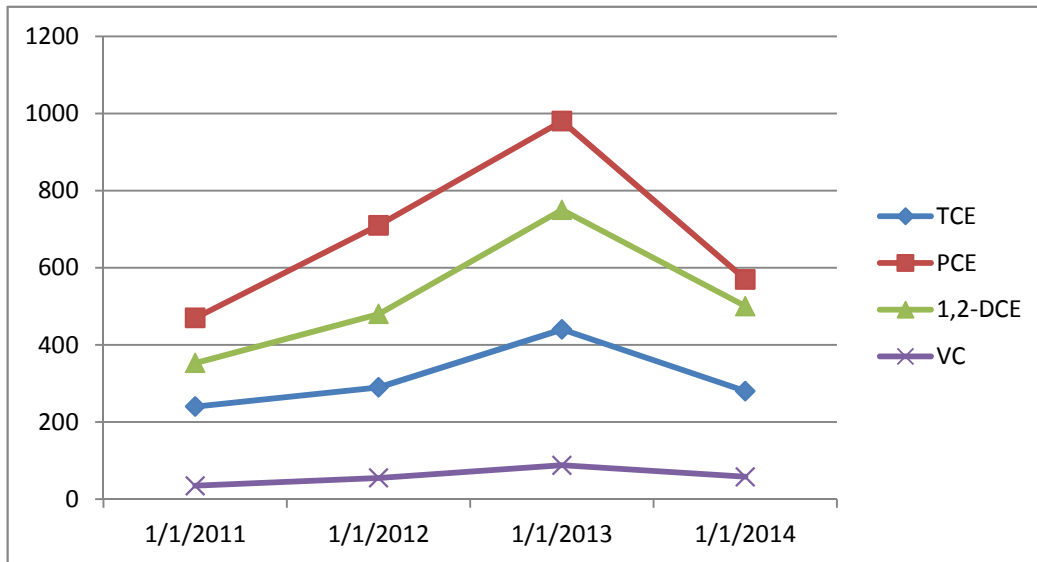
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/27/2011	240	470	353	35
4/30/2012	290	710	480	55
5/7/2013	440	980	750	88
5/28/2014	280	570	500	58

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-7 Groundwater Data

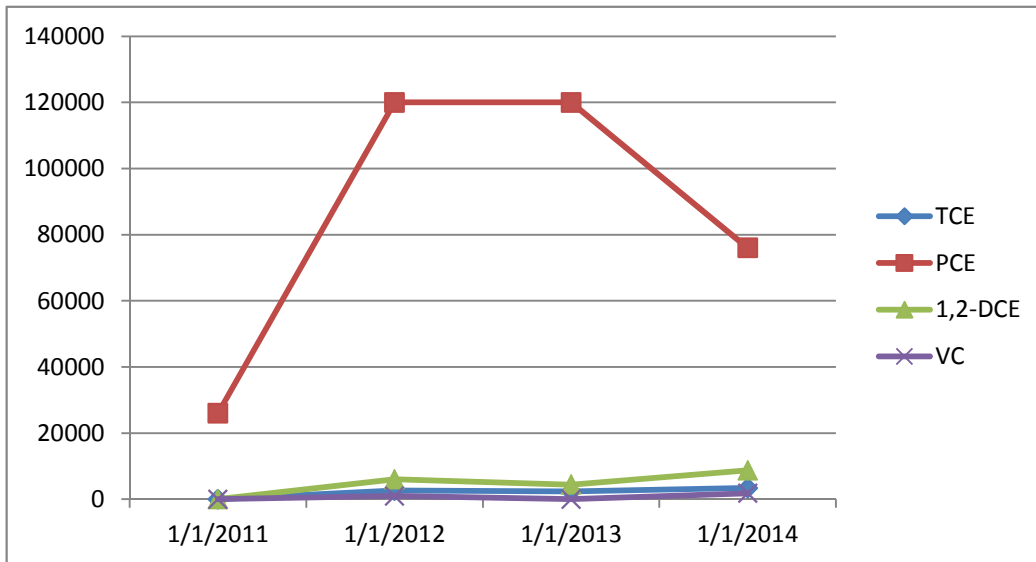
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/28/2011	<	26,000	<	<
5/1/2012	2,600	120,000	6,000	960
5/8/2013	2,300	120,000	4,400	<
5/29/2014	3,400	76,000	8,700	1,800

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-8 Groundwater Data

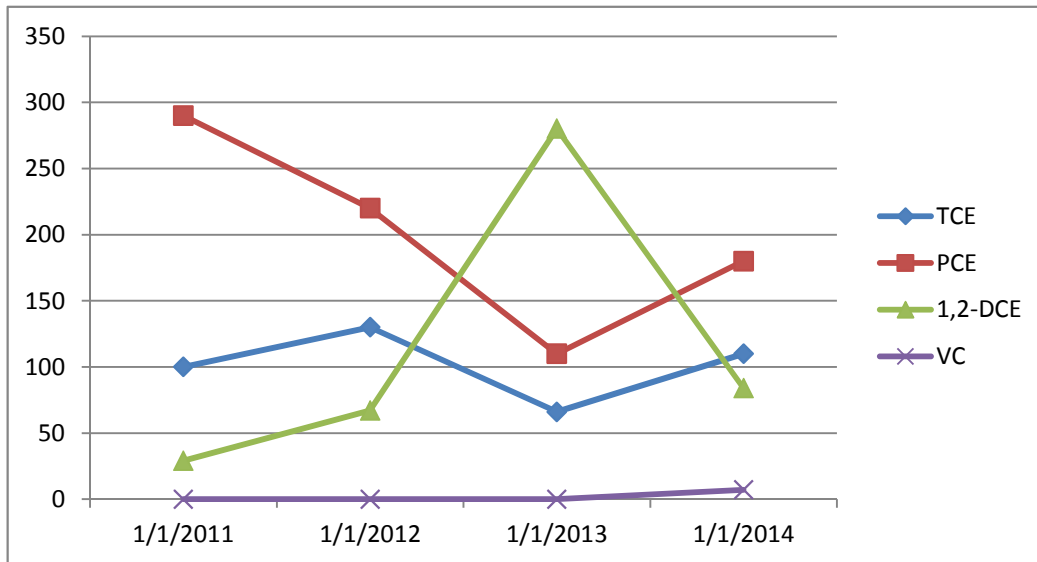
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/28/2011	100	290	29	<
5/2/2012	130	220	67	<
5/8/2013	66	110	280	<
5/29/2014	110	180	84	7.1

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-A-6 Groundwater Data

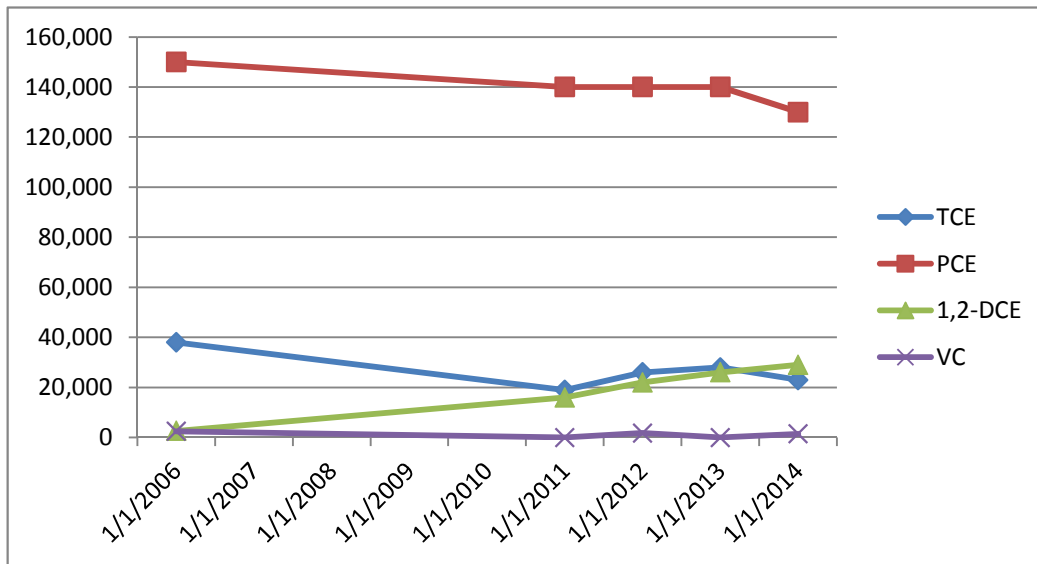
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/10/2006	38,000	150,000	2,600	2,500
4/28/2011	19,000	140,000	16,000	<
5/1/2012	26,000	140,000	22,000	1,800
5/8/2013	28,000	140,000	26,000	<
5/30/2014	23,000	130,000	29,000	1,500

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-C-2 Groundwater Data

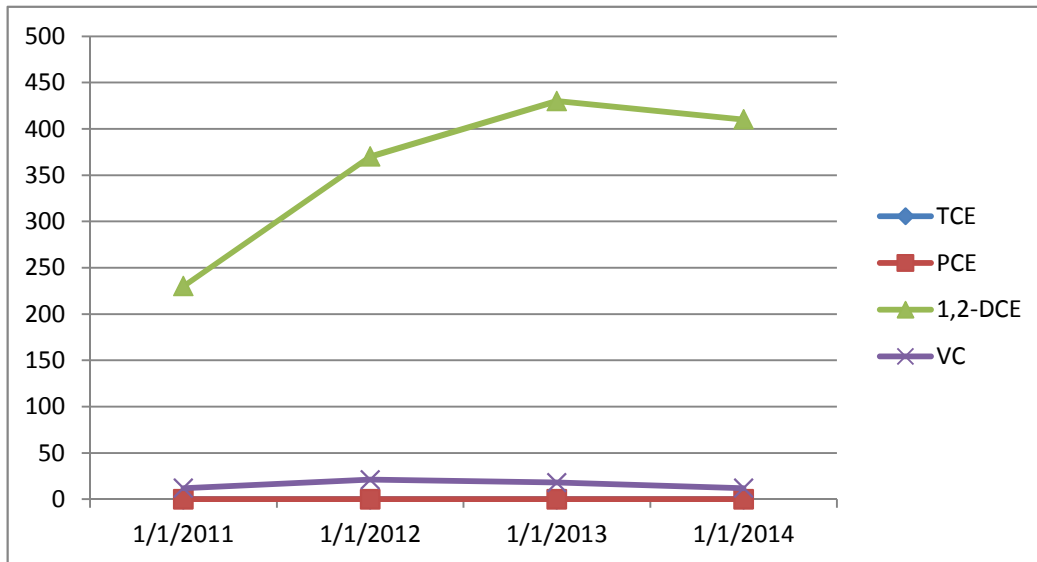
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/29/2011	<	<	230	12
5/3/2012	<	<	370	21
5/7/2013	<	<	430	18
5/28/2014	<	<	410	12

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-7-P-1 Groundwater Data

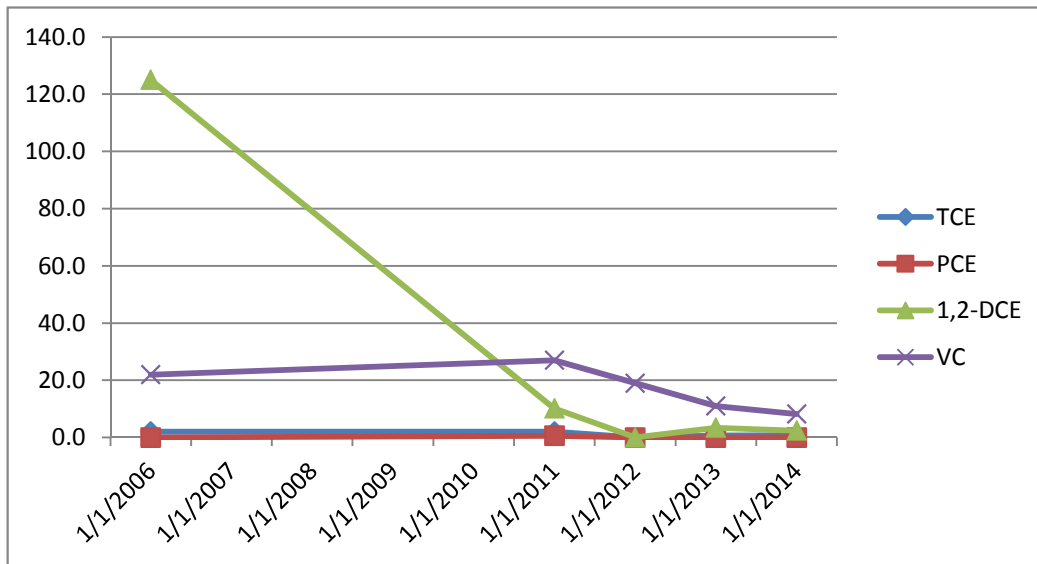
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/14/2006	2.1	<	125	22
4/29/2011	2	0.6	10	27
5/3/2012	<	<	<	19
5/7/2013	0.74	<	3.4	11
5/16/2014	0.78	<	2.4	8.2

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-6-1 Groundwater Data

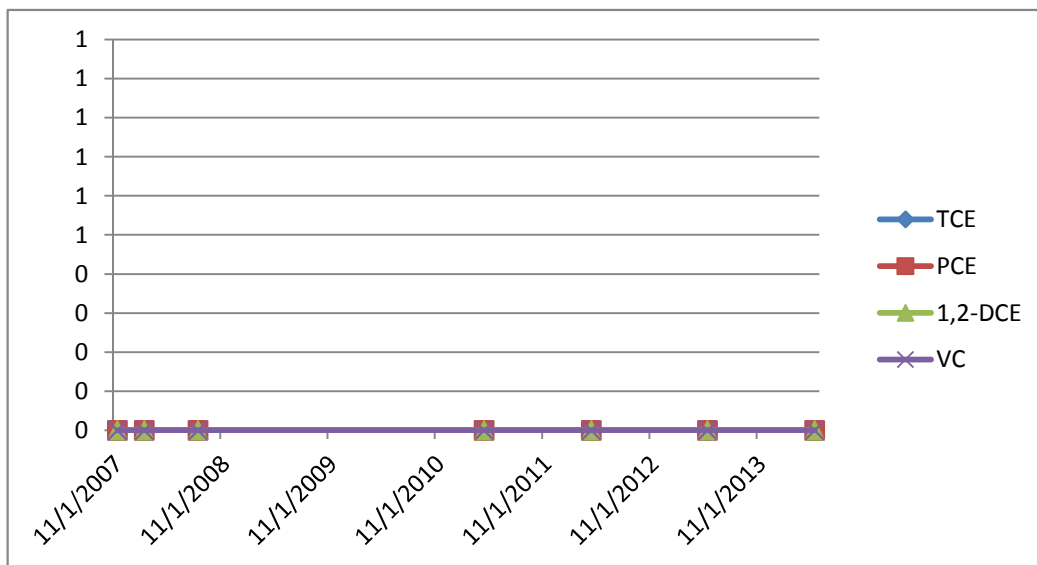
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/30/2007	<	<	<	<
2/20/2008	<	<	<	<
8/14/2008	<	<	<	<
4/27/2011	<	<	<	<
4/25/2012	<	<	<	<
5/14/2013	<	<	<	<
5/14/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-6-2 Groundwater Data

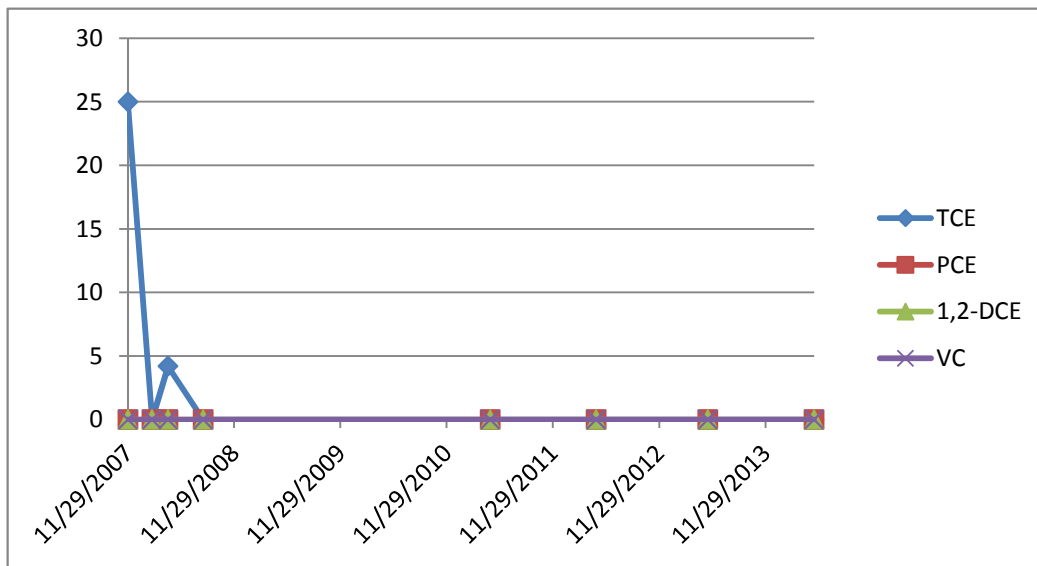
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/29/2007	25	<	<	<
2/20/2008	<	<	<	<
4/15/2008	4.2	<	<	<
8/14/2008	<	<	<	<
4/27/2011	<	<	<	<
4/25/2012	<	<	<	<
5/14/2013	<	<	<	<
5/14/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-6-F-8 Groundwater Data

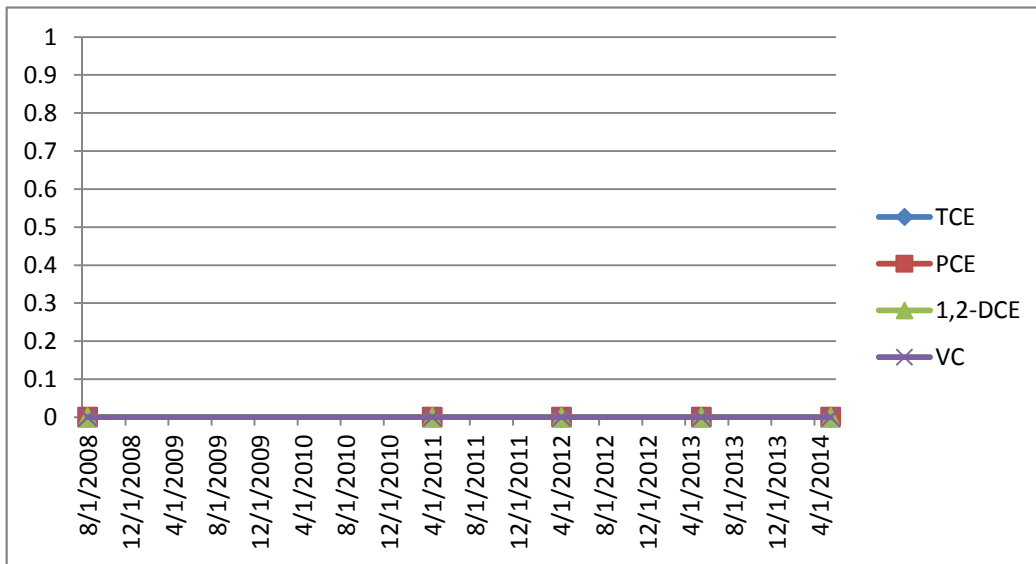
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/13/2008	<	<	<	<
4/27/2011	<	<	<	<
4/25/2012	<	<	<	<
5/14/2013	<	<	<	<
5/30/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-8-1 Groundwater Data

GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/29/2011	<	<	0.86	<
4/30/2012	<	<	0.85	<
5/13/2013	<	<	<	<
5/15/2014	<	<	0.88	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-8-2 Groundwater Data

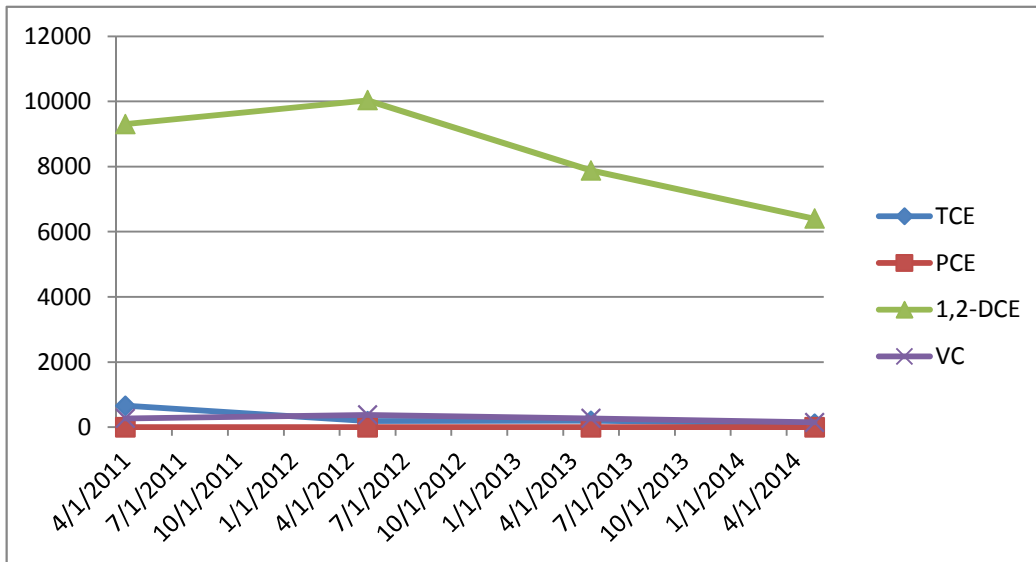
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/29/2011	660	<	9,300	270
5/3/2012	190	<	10,034	380
5/13/2013	200	<	7,877	270
5/16/2014	110	<	6400	150

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-8-3 Groundwater Data

GM Components Holdings, LLC
Lockport, New York

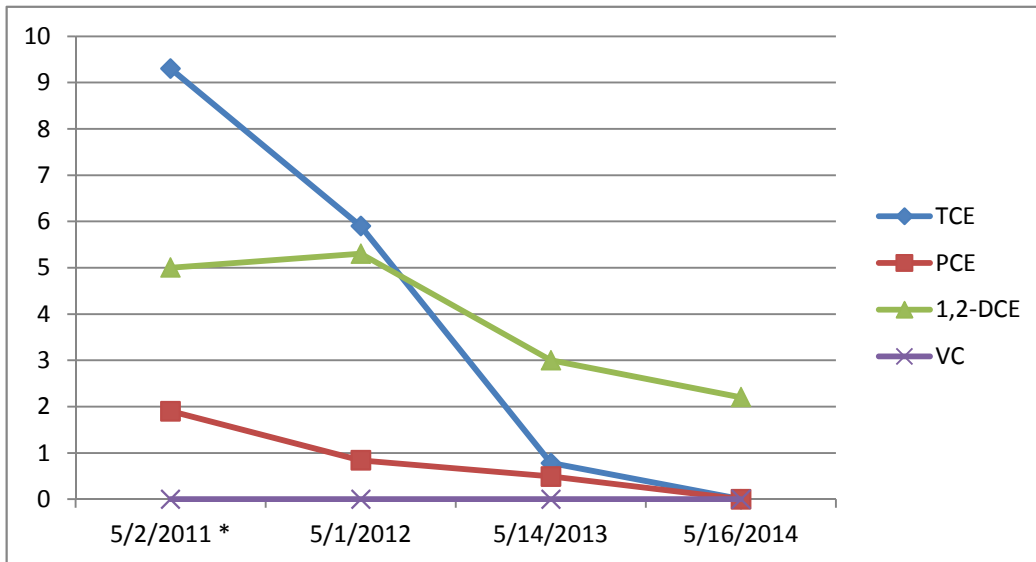
Date	TCE	PCE	1,2-DCE	VC
5/2/2011 *	9.3	1.9	5	<
5/1/2012	5.9	0.84	5.3	<
5/14/2013	0.78	0.49	3	<
5/16/2014	<	<	2.2	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result

* = results are the higher of the sample or its respective duplicate sample.



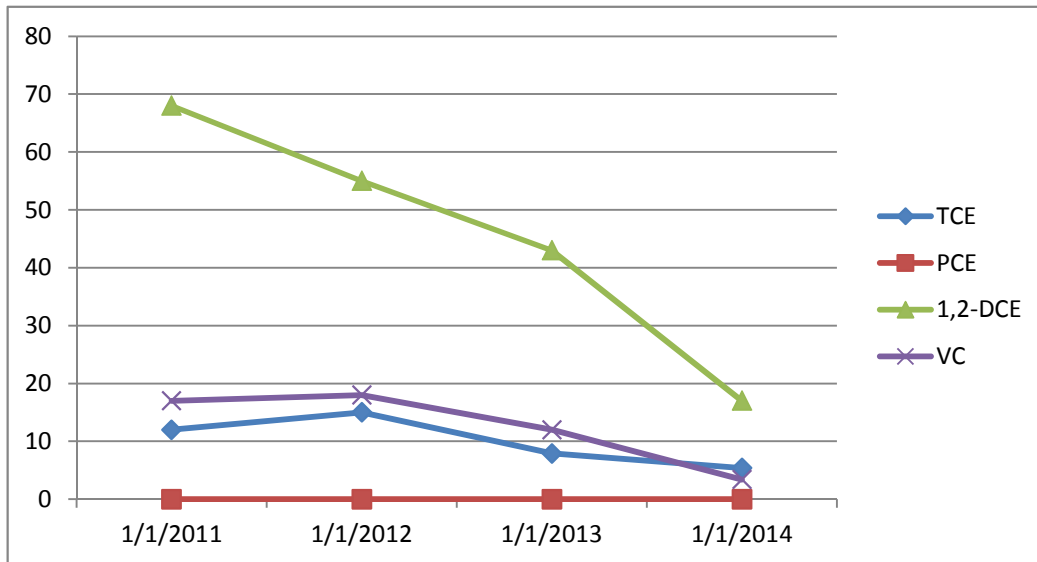
MW-8-4 Groundwater Data
 Building 8 BCP Site
 GM Components Holdings, LLC
 Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
5/2/2011	12	<	68	17
5/1/2012	15	<	55	18
5/13/2013	7.9	<	43	12
6/2/2014	5.4	<	17	3.4

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-8-003-B Groundwater Data

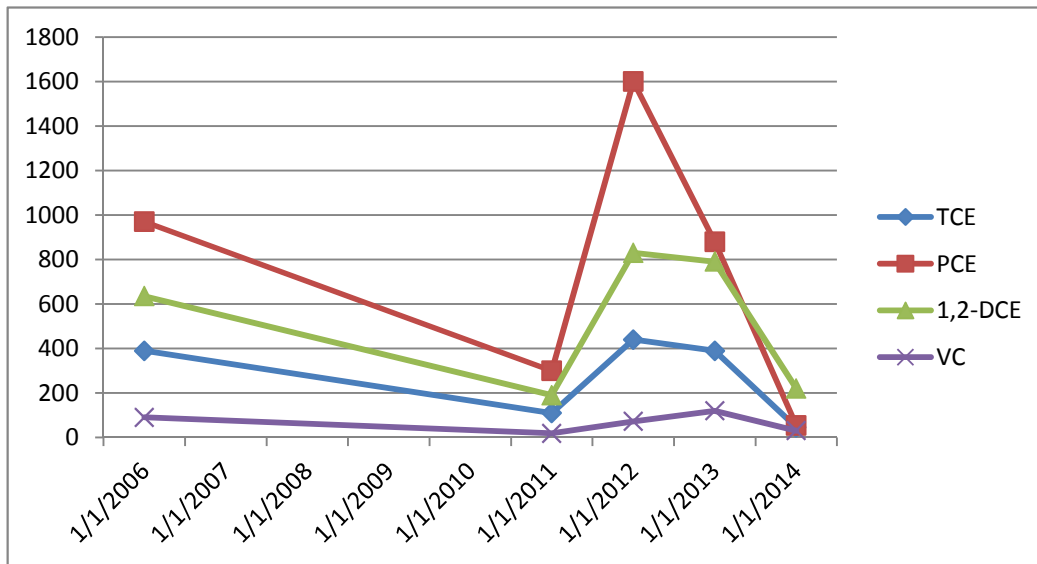
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/11/2006	390	970	635	91
4/28/2011	110	300	1,600	19
4/30/2012	440	830	790	73
5/10/2013	390	220	790	120
5/29/2014	46	55	220	31

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-9-101A Groundwater Data

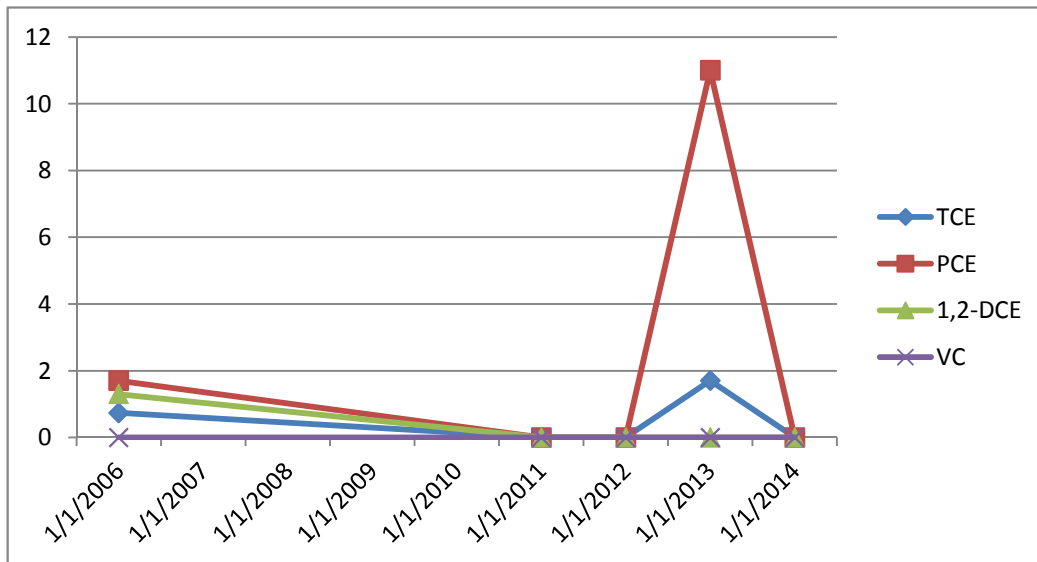
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/10/2006	0.74	1.7	1.3	<
4/28/2011	<	<	<	<
5/3/2012	<	<	<	<
5/13/2013	1.7	11	<	<
5/22/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-9-12 Groundwater Data

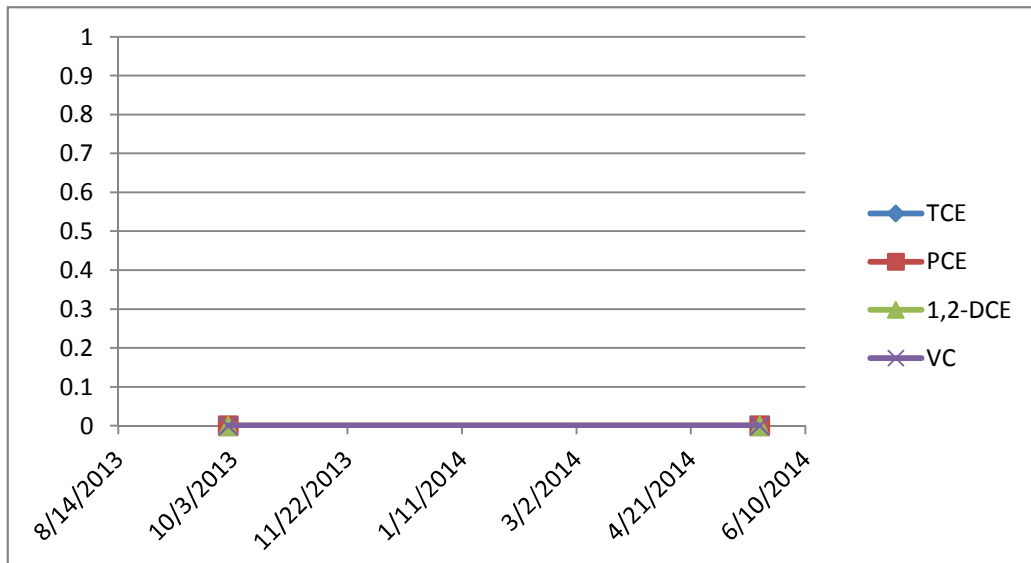
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/1/2013	<	<	<	<
5/21/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



Bldg 10-MW-1 Groundwater Data

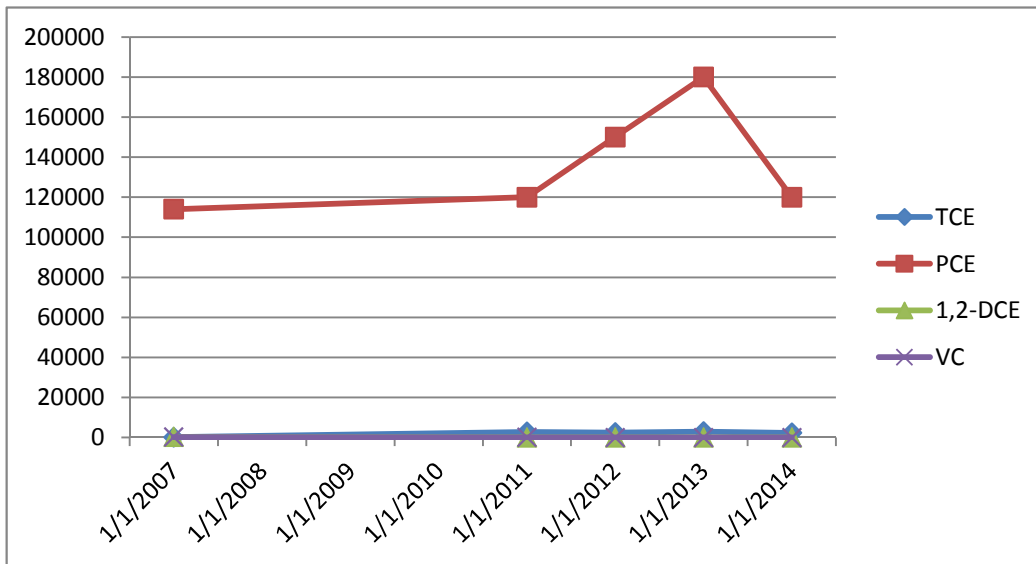
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
7/18/2007	200	114,000	235	220
4/29/2011	2,800	120,000	16	100
5/2/2012	2,500	150,000	<	<
5/9/2013	3,000	180,000	<	<
6/3/2014	2300	120000	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-10-2 Groundwater Data

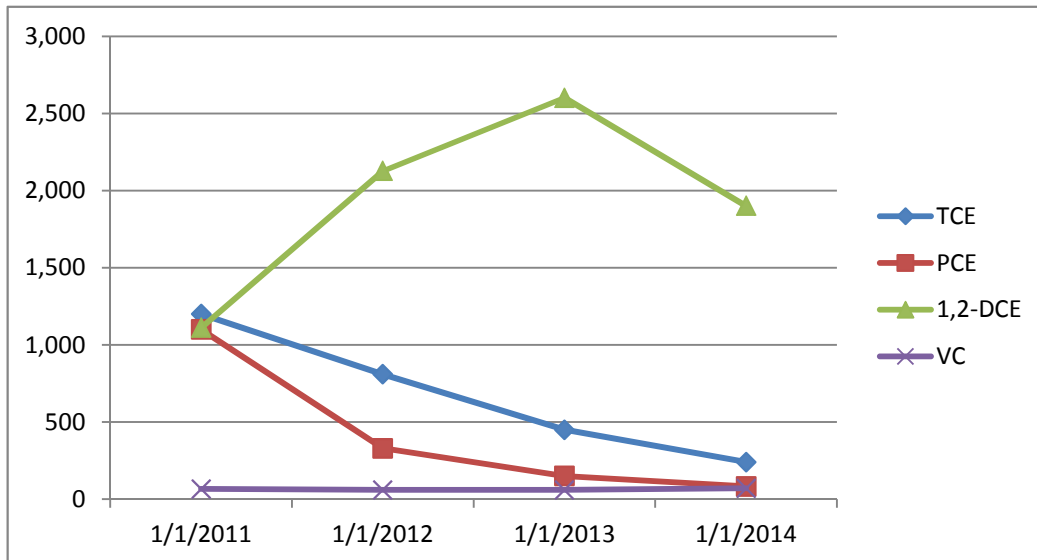
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/29/2011	1,200	1,100	1,110	66
5/2/2012	810	330	2,126	60
5/9/2013	450	150	2,600	60
5/22/2014	240	83	1900	70

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



MW-10-3 Groundwater Data

GM Components Holdings, LLC
Lockport, New York

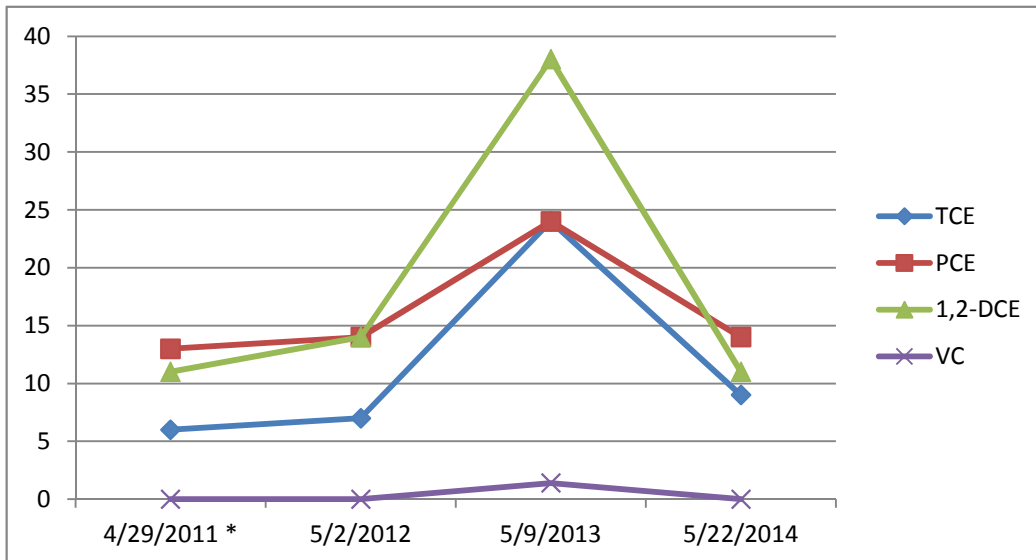
Date	TCE	PCE	1,2-DCE	VC
4/29/2011 *	6	13	11	<
5/2/2012	7	14	14	<
5/9/2013	24	24	38	1.4
5/22/2014	9	14	11	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result

* = results are the higher of the sample or its respective duplicate sample.



TK-6 Groundwater Data

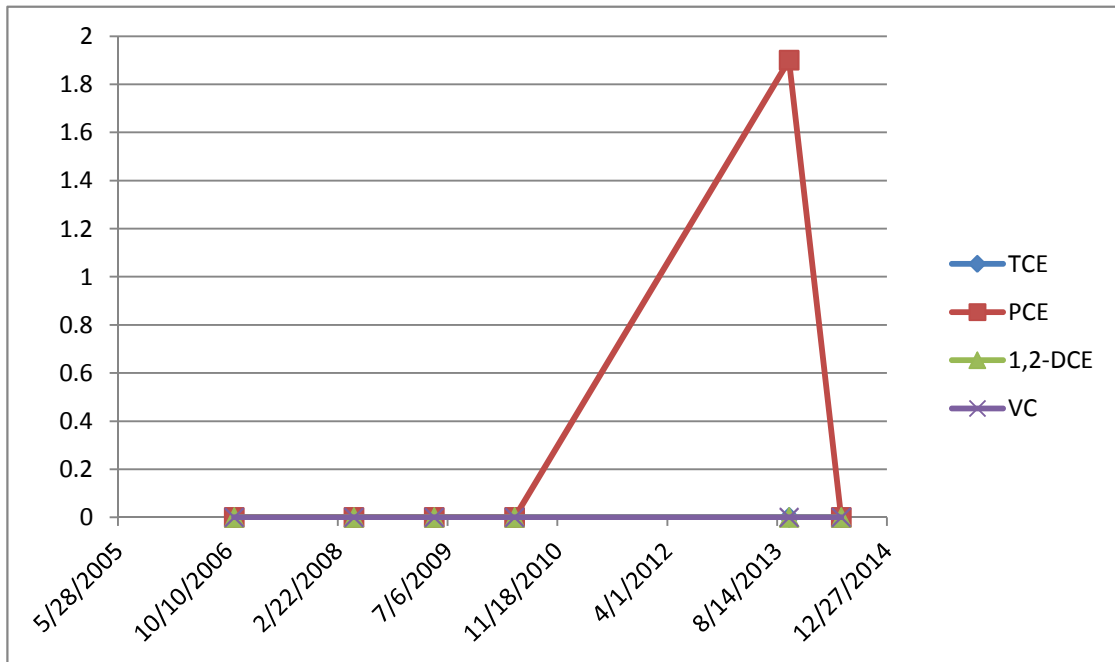
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
11/8/2006	<	<	<	<
5/6/2008	<	<	<	<
5/6/2009	<	<	<	<
5/7/2010	<	<	<	<
10/7/2013	<	1.9	<	<
6/2/2014	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result



APPENDIX C

DATA QUALITY ASSESSMENT & VERIFICATION REPORT



MEMORANDUM

To: Denis Conley REF. No.: 58507-256022

FROM: Kathy Willy/eew/107 *KW* DATE: July 17, 2014

RE: **Analytical Results and Reduced Validation
Groundwater Sampling
General Motors Corporation
Lockport, New York
May-June 2014**

1.0 Introduction

The following document details a reduced validation of analytical results for water samples collected in support of the Groundwater Sampling at the GM Lockport Site during May-June 2014. Samples were submitted to TestAmerica Laboratories, Inc., located in Amherst, New York. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

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

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

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

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

2.0 Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

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

3.0 Laboratory Method Blank Analyses

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

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

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

4.0 Surrogate Spike Recoveries

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

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample Analyses

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

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

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

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

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

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

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7.0 Field QA/QC Samples

Field QA/QC was not collected for this sampling event.

8.0 Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. No positive analyte detections less than the practical quantitation limit (PQL) but greater than the MDL were reported. Non-detect results were presented as non-detect at the PQL in Table 2.

9.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters										Comments
					Hydrogen Chloride, Sulfate	Ammonia	Nitrate, Nitrite	Dissolved Gases	Alkalinity	Sulfide	Select Metals	Select VOCs	TOC		
MW-4-051314	MW-4	Water	5/13/2014	17:00	X	X	X	X	X	X	X	X	X	X	
MW-10-051414	MW-10	Water	5/14/2014	10:15	X	X	X	X	X	X	X	X	X	X	
MW-6-2-051414	MW-6-2	Water	5/14/2014	14:00		X	X	X	X	X	X	X	X	X	
MW-6-1-051414	MW-6-1	Water	5/14/2014	17:10		X	X	X	X	X	X	X	X	X	
MW-8-1-051514	MW-8-1	Water	5/15/2014	16:00		X	X	X	X	X	X	X	X	X	
MW-7-P-1-051614	MW-7-P-1	Water	5/16/2014	11:15		X	X	X	X	X	X	X	X	X	
MW-8-2-051614	MW-8-2	Water	5/16/2014	15:00		X	X	X	X	X	X	X	X	X	
MW-8-3-051614	MW-8-3	Water	5/16/2014	15:50		X	X	X	X	X	X	X	X	X	
MW-15-051914	MW-15	Water	5/19/2014	11:35		X	X	X	X	X	X	X	X	X	
MW-12-051914	MW-12	Water	5/19/2014	15:40	X	X	X	X	X	X	X	X	X	X	
MW-13-052014	MW-13	Water	5/20/2014	10:15	X	X	X	X	X	X	X	X	X	X	
MW-11-052014	MW-11	Water	5/20/2014	14:15	X	X	X	X	X	X	X	X	X	X	
MW-9-12-052114	MW-9-12	Water	5/21/2014	12:15		X	X	X	X	X	X	X	X	X	
MW-9-101A-052214	MW-9-101-A	Water	5/22/2014	09:35		X	X	X	X	X	X	X	X	X	
MW-10-3-052214	MW-10-3	Water	5/22/2014	12:35		X	X	X	X	X	X	X	X	X	
MW-10-2-052214	MW-10-2	Water	5/22/2014	15:20		X	X	X	X	X	X	X	X	X	
MW-14-052314	MW-14	Water	5/23/2014	11:455	X	X	X	X	X	X	X	X	X	X	
MW-7-2-052314	MW-7-2	Water	5/23/2014	15:05		X	X	X	X	X	X	X	X	X	
MW-7-4-052314	MW-7-4	Water	5/23/2014	15:45		X	X	X	X	X	X	X	X	X	
MW-7-1-052714	MW-7-1	Water	5/27/2014	13:20		X	X	X	X	X	X	X	X	X	
MW-7-5-052714	MW-7-5	Water	5/27/2014	16:45		X	X	X	X	X	X	X	X	X	
GW-Duplicate	MW-7-5	Water	5/27/2014	16:45		X	X	X	X	X	X	X	X	X	Field duplicate of sample MW-7-5-052714
MW-7-6-052814	MW-7-6	Water	5/28/2014	13:10		X	X	X	X	X	X	X	X	X	

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters										Comments	
					Hydrogen Chloride, Sulfate	Ammonia	Nitrate, Nitrite	Dissolved Gases	Alkalinity	Sulfide	Select Metals	Select VOCs	TOC			
MW-7-C-2-052814	MW-7-C-2	Water	5/28/2014	17:45	X	X	X	X	X	X	X	X	X	X		
MW-7-7-052914	MW-7-7	Water	5/29/2014	15:40	X	X	X	X	X	X	X	X	X	X		
MW-7-8-052914	MW-7-8	Water	5/29/2014	16:25	X	X	X	X	X	X	X	X	X	X		
MW-8-003-B-052914	MW-8-003-B	Water	5/29/2014	11:30	X	X	X	X	X	X	X	X	X	X		
MW-7-053014	MW-7	Water	5/30/2014	12:40	X	X	X	X	X	X	X	X	X	X		
MW-6-F-8-053014	MW-6-F-8	Water	5/30/2014	08:55	X	X	X	X	X	X	X	X	X	X		
MW-7-A-6-053014	MW-7-A-6	Water	5/30/2014	11:30	X	X	X	X	X	X	X	X	X	X		
MW-8-4-060214	MW-8-4	Water	6/2/2014	11:35	X	X	X	X	X	X	X	X	X	X		
TK-6-060214	TK-6	Water	6/2/2014	16:00	X	X	X	X	X	X	X	X	X	X		
BLDG-10-MW-1-060314	BLDG-10-MW-1	Water	6/3/2014	11:00	X	X	X	X	X	X	X	X	X	X		
TB	TRIP BLANK	Water	6/3/2014	-											X	Trip Blank
MW-7-3-060314	MW-7-3	Water	6/3/2014	15:40	X	X	X	X	X	X	X	X	X	X		
TB	TRIP BLANK	Water	6/3/2014	-											X	Trip Blank

Notes:

TOC - Total Organic Carbons

VOCs - Volatile Organic Compounds

TABLE 2

GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014

<i>Sample Location:</i>		<i>BLDG-10-MW-1</i>	<i>MW-4</i>	<i>MW-6-1</i>	<i>MW-6-2</i>	<i>MW-6-F-8</i>	<i>MW-7</i>	<i>MW-7-1</i>	<i>MW-7-2</i>	<i>MW-7-3</i>
<i>Sample ID:</i>		<i>BLDG-10-MW-1-060314</i>	<i>MW-4-051314</i>	<i>MW-6-1-051414</i>	<i>MW-6-2-051414</i>	<i>MW-6-F-8-053014</i>	<i>MW-7-053014</i>	<i>MW-7-1-052714</i>	<i>MW-7-2-052314</i>	<i>MW-7-3-060314</i>
<i>Sample Date:</i>		<i>6/3/2014</i>	<i>5/13/2014</i>	<i>5/14/2014</i>	<i>5/14/2014</i>	<i>5/30/2014</i>	<i>5/30/2014</i>	<i>5/27/2014</i>	<i>5/23/2014</i>	<i>6/3/2014</i>
<i>Parameters:</i>	<i>Units</i>									
<i>Volatile Organic Compounds</i>										
cis-1,2-Dichloroethene	µg/L	2000 U	22000	1.0 U	1.0 U	1.0 U	46000	1.0 U	1.0 U	5.7
Tetrachloroethene	µg/L	120000	500 U	1.0 U	1.0 U	1.0 U	20000 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	2000 U	500 U	1.0 U	1.0 U	1.0 U	20000 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2300	22000	1.0 U	1.0 U	1.0 U	880000	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2000 U	2900	1.0 U	1.0 U	1.0 U	20000 U	1.0 U	1.0 U	57
<i>Metals</i>										
Iron	mg/L	1.0	0.81	11.7	0.062	0.22	0.050 U	0.42	0.076	0.62
Magnesium	mg/L	87.3	63.8	45.0	44.4	359	34.7	105	29.7	211
Manganese	mg/L	0.42	0.47	1.7	0.30	0.69	0.0088	0.35	0.023	0.17
<i>Gas</i>										
Carbon dioxide	µg/L	19000	14000	32000	20000	25000	4300	15000	9100	20000
Ethane	µg/L	7.5 U	75	7.5 U	7.5 U	7.5 U	38 U	7.5 U	7.5 U	8.6
Ethene	µg/L	7.0 U	310 J	7.0 U	7.0 U	7.0 U	48	7.0 U	7.0 U	9.0
Hydrogen	nM	-	0.52	-	-	-	-	-	-	-
Hydrogen	µg/L	-	-	-	-	-	-	-	-	-
Methane	µg/L	7.7	1200	16	4.0 U	12	9.0 J	25	1.6 J	310
<i>General Chemistry</i>										
Alkalinity, total (as CaCO ₃)	mg/L	315	299	422	419	392	258	333	356	297
Ammonia	mg/L	0.16	1.7	0.35	0.020 U	0.020 U	0.43	0.039	0.020 U	1.8
Chloride	mg/L	414	1750	765	1510	3840	292	1410	80.3	7260
Nitrate (as N)	mg/L	0.033 J	0.079	0.050 U	0.24	0.16	0.050 U	0.050 U	0.055	0.32
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.034 J	0.024 J
Sulfate	mg/L	240	223	43.8	122	406	138	98.6	18.9	906
Sulfide	mg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	5.4	2.9	3.9	2.6	2.0	5.4	1.2	1.1	2.3

TABLE 2

**GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014**

<i>Sample Location:</i>	<i>MW-7-4</i>	<i>MW-7-5</i>	<i>MW-7-5</i>	<i>MW-7-6</i>	<i>MW-7-7</i>	<i>MW-7-8</i>	<i>MW-7-A-6</i>	<i>MW-7-C-2</i>	<i>MW-7-P-1</i>	
<i>Sample ID:</i>	<i>MW-7-4-052314</i>	<i>GW-Duplicate</i>	<i>MW-7-5-052714</i>	<i>MW-7-6-052814</i>	<i>MW-7-7-052914</i>	<i>MW-7-8-052914</i>	<i>MW-7-A-6-053014</i>	<i>MW-7-C-2-052814</i>	<i>MW-7-P-1-051614</i>	
<i>Sample Date:</i>	<i>5/23/2014</i>	<i>5/27/2014</i> <i>(Duplicate)</i>	<i>5/27/2014</i>	<i>5/28/2014</i>	<i>5/29/2014</i>	<i>5/29/2014</i>	<i>5/30/2014</i>	<i>5/28/2014</i>	<i>5/16/2014</i>	
<i>Parameters:</i>	<i>Units</i>									
<i>Volatile Organic Compounds</i>										
cis-1,2-Dichloroethene	µg/L	1.0 U	430	440	500	8700	84	29000	410	2.4
Tetrachloroethene	µg/L	1.0 U	4700	5200	570	76000	180	130000	5.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	100 U	100 U	10 U	1000 U	4.0 U	110	5.0 U	3.0
Trichloroethene	µg/L	1.0 U	540	580	280	3400	110	23000	5.0 U	0.78 J
Vinyl chloride	µg/L	1.0 U	100 U	100 U	58	1800	7.1	1500	12	8.2
<i>Metals</i>										
Iron	mg/L	0.28	0.51	0.47	0.44	0.48	2.3	0.35	0.59	81.3
Magnesium	mg/L	31.7	150	146	81.0	46.0	172	97.7	83.0	647
Manganese	mg/L	0.012	1.1	1.1	0.18	0.016	0.10	0.88	0.17	9.4
<i>Gas</i>										
Carbon dioxide	µg/L	7000	22000	23000	11000	1000 U	1000 U	27000	11000	38000
Ethane	µg/L	7.5 U	7.5 U	7.5 U	2.4 J	380 U	7.5 U	28	7.5 U	20
Ethene	µg/L	7.0 U	7.0 U	7.0 U	7.0 U	260 J	7.0 U	230	7.0 U	1.8 J
Hydrogen	nM	-	-	-	-	-	-	-	-	-
Hydrogen	µg/L	-	-	-	-	-	-	-	-	-
Methane	µg/L	4.0 U	7.7	9.0	110	580	43	800	77	2200
<i>General Chemistry</i>										
Alkalinity, total (as CaCO ₃)	mg/L	372	356	354	376	59.3	86.2	481	292	231
Ammonia	mg/L	0.020 U	0.012 J	0.012 J	0.030	1.2	0.078	0.055	0.35	141
Chloride	mg/L	175	3980	3970	3320	926	2540	625	253	4420
Nitrate (as N)	mg/L	0.27	1.8	1.8	0.15	0.91	0.050 U	0.050 U	0.034 J	0.050 U
Nitrite (as N)	mg/L	0.036 J	0.051	0.051	0.050 U	0.034 J	0.050 U	0.050 U	0.050 U	0.050 U
Sulfate	mg/L	37.8	236	228	177	135	110	62.8	552	43.1
Sulfide	mg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.80	0.10 U	0.10 U	0.10 U	0.063 J
Total organic carbon (TOC)	mg/L	0.59 J	3.4	3.2	1.5	13.7	0.84 J	9.7	0.95 J	3.9

TABLE 2

GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014

Sample Location:	MW-8-1	MW-8-2	MW-8-3	MW-8-003-B	MW-8-4	MW-9-12	MW-9-101-A	MW-10	
Sample ID:	MW-8-1-051514	MW-8-2-051614	MW-8-3-051614	MW-8-003-B-052914	MW-8-4-060214	MW-9-12-052114	MW-9-101A-052214	MW-10-051414	
Sample Date:	5/15/2014	5/16/2014	5/16/2014	5/29/2014	6/2/2014	5/21/2014	5/22/2014	5/14/2014	
Parameters:	Units								
<i>Volatile Organic Compounds</i>									
cis-1,2-Dichloroethene	µg/L	0.88 J	6400	2.2	220	17	1.0 U	1.0 U	170
Tetrachloroethene	µg/L	1.0 U	130 U	1.0 U	55	1.0 U	1.0 U	1.0 U	4.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	130 U	1.0 U	25 U	1.0 U	1.0 U	1.0 U	4.0 U
Trichloroethene	µg/L	1.0 U	110 J	1.0 U	46	5.4	1.0 U	1.0 U	48
Vinyl chloride	µg/L	1.0 U	150	1.0 U	31	3.4	1.0 U	1.0 U	29
<i>Metals</i>									
Iron	mg/L	0.023 J	0.29	3.8	0.52	3.1	0.82	0.027 J	0.070
Magnesium	mg/L	102	42.1	102	10.7	121	46.9	150	53.7
Manganese	mg/L	0.12	0.023	1.7	0.18	1.0	0.26	0.0029 J	1.9
<i>Gas</i>									
Carbon dioxide	µg/L	18000	10000	9400	1000 U	4200	5400	5300	15000
Ethane	µg/L	14	7.5 U	75 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
Ethene	µg/L	7.0 U	1.7 J	70 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U
Hydrogen	nM	-	-	-	-	-	-	-	0.95
Hydrogen	µg/L	-	-	-	-	-	-	-	-
Methane	µg/L	120	120	150	7.6	140	14	4.0 U	110
<i>General Chemistry</i>									
Alkalinity, total (as CaCO ₃)	mg/L	310	366	364	160	175	271	205	272
Ammonia	mg/L	1.2	0.78	2.8	0.014 J	0.18	0.023	0.020 U	0.010 J
Chloride	mg/L	1430	305	1710	1270	4160	1040	1710	2580
Nitrate (as N)	mg/L	0.050 U	0.067	0.076	0.62	0.050 U	1.7	9.1	0.050 U
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.026 J	0.050 U	0.050 U
Sulfate	mg/L	645	194	56.6	78.5	455	186	1420	370
Sulfide	mg/L	1.4	0.27	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	0.55 J	2.3	7.0	4.0	2.9	1.7	5.2	3.5

GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014

Sample Location:	MW-10-2	MW-10-3	MW-11	MW-12	MW-13	MW-14	MW-15	TK-6	
Sample ID:	MW-10-2-052214	MW-10-3-052214	MW-11-052014	MW-12-051914	MW-13-052014	MW-14-052314	MW-15-051914	TK-6-060214	
Sample Date:	5/22/2014	5/22/2014	5/20/2014	5/19/2014	5/20/2014	5/23/2014	5/19/2014	6/2/2014	
Parameters:	Units								
Volatile Organic Compounds									
cis-1,2-Dichloroethene	µg/L	1900	11	1.0 U	130	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	83	14	1.0 U	2.0	1.0 U	1.0 U	6.2	1.0 U
trans-1,2-Dichloroethene	µg/L	24	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	240	9.0	1.0 U	7.4	1.0 U	1.0 U	0.64 J	1.0 U
Vinyl chloride	µg/L	70	1.0 U	1.0 U	44	1.0 U	1.0 U	1.0 U	1.0 U
Metals									
Iron	mg/L	0.12	0.021 J	0.18	3.7	6.4	0.036 J	0.050 U	0.025 J
Magnesium	mg/L	75.0	21.5	34.4	50.0	42.3	40.1	42.5	45.0
Manganese	mg/L	0.11	0.0030 U	0.13	4.9	4.4	0.30	0.11	0.0019 J
Gas									
Carbon dioxide	µg/L	9700	1200	5000	16000	16000	7100	21000	6700
Ethane	µg/L	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
Ethene	µg/L	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U
Hydrogen	nM	-	-	-	33	1.8	2.3	0.83	-
Hydrogen	µg/L	-	-	60	-	-	-	-	-
Methane	µg/L	15	4.0 U	6.7	110	73	8.3	4.0 U	4.0 U
General Chemistry									
Alkalinity, total (as CaCO ₃)	mg/L	305	144	274	291	419	396	439	365
Ammonia	mg/L	0.49	0.020 U	0.12	1.2	0.88	0.055	0.033	0.020 U
Chloride	mg/L	1740	88.2	200	1650	1740	790	590	949
Nitrate (as N)	mg/L	0.063	1.7	0.29	0.032 J	0.089	0.050 U	0.46	0.75
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.036 J	0.050 U	0.050 U
Sulfate	mg/L	268	136	61.5	96.5	82.5	34.7	55.2	212
Sulfide	mg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	2.0	1.5	1.2	4.0	4.5	1.6	2.2	1.4

Notes:

J - Estimated concentration

U - Not present at the associated reporting limit

- Not analyzed

TABLE 3

**ANALYTICAL METHODS AND HOLDING TIME CRITERIA
GROUNDWATER SAMPLING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY - JUNE 2014**

<i>Parameter</i>	<i>Method</i>	<i>Matrix</i>	<i>Holding Time</i>	
			<i>Collection to Extraction (Days)</i>	<i>Collection or Extraction to Analysis (Days)</i>
Select VOCs	SW 846 8260	Water	-	14
TOC	SW 846 9060	Water	-	28
Sulfide	EPA 376.1	Water	-	7
Total Nitrogen (as ammonia)	EPA 350.1	Water	-	28
Chloride, Sulfate	EPA 300	Water	-	28
Nitrite, Nitrate	EPA 353.2	Water	-	48 hours
Alkalinity	SM 2320	Water	-	14
Methane, Ethane, Ethene, Carbon dioxide	RSK 175	Water	-	14
Hydrogen	AM20GAX	Water	-	14
Select Metals	SW-846 6010B	Water	-	180

Notes

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

SM - "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions.

EPA - "Methods for Chemical Analysis of Water and Wastes", USEPA-600/4-79-020, March 1983 with subsequent revisions.

VOCs - Volatile Organic Compounds

TOC - Total Organic Carbon

APPENDIX D

ANAEROBIC BIODEGRADATION SCREENING TABLES

EPA cVOC MONITORED NATURAL ATTENUATION RANKING SYSTEM

Strength of Evidence Scorecard
 Delphi Harrison Thermal Systems Site
 GM Component Holdings, LLC
 Lockport, New York

Analysis	Concentration in Most Contaminated Zone	Value	MW-7-1	MW-7-2	MW-7-3	MW-7-4	MW-7-5	MW-7-6	MW-7-7	MW-7-8	MW-7-A-6	MW-7-C-2	MW-7-P-1	MW-6-1	MW-6-2	MW-6-F-8	MW-8-1	MW-8-2	MW-8-3	MW-8-4	MW-8-003-B	MW-9-101A	MW-9-12	TK-6	MW-10-1	MW-10-2	MW-10-3
DO	<0.5 mg/L	3	3	3	3	0	3	3	3	3	3	3	3	3	3	3	3	3	0	3	0	0	3	0	3	3	0
DO	>5 mg/l	-3																									
Nitrate	<1 mg/L	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	2	2	2	0
Iron II	>1 mg/l	2	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	0
Sulfate	<20 mg/L	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulfide	>1 mg/L	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Methane	<0.5 mg/L	0																									
Methane	>0.5 mg/L	3	0	0	0	0	0	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0
ORP	<50 mV	1																									
ORP	<-100 mV	2	1	1	2	0	0	1	2	2	1	1	2	1	1	0	2	2	1	2	0	0	1	0	1	1	0
pH	5< pH <9	0																									
pH	5> pH >10	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOC	>20 mg/L	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temp	> 20°C	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Carbon Dioxide	>2 times background (15,000)	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkalinity	>2 times background (356)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chloride	>2 times background (2,195)	2	0	0	2	0	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrogen	>1 nM	3																									
Hydrogen	<1nM	0																									
Volatile Fatty Acids	>0.1 mg/L	2																									
BTEX	>0.1 mg/L	2																									
PCE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TCE	If Daughter Product	2	0	0	0	0	2	2	2	2	2	0	2	0	0	0	0	2	0	2	2	0	0	0	2	2	2
DCE	If Daughter Product	2	0	0	2	0	2	2	2	2	2	2	2	0	0	0	0	2	2	2	2	0	0	0	0	2	2
VC	If Daughter Product	2	0	0	2	0	0	2	2	2	2	2	2	0	0	0	0	2	0	2	2	0	0	0	0	2	0
1,1,1-TCA		0																									
DCA	If Daughter Product	2																									
Carbon Tetrachloride		0																									
Chloroethane	If Daughter Product	2																									
Ethene/Ethane	>0.01 mg/L or	2																									
	>0.1 mg/L	3	0	0	0	0	0	0	3	0	3	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Chloroform	If Daughter Product	2																									
Dichloromethane	If Daughter Product	2																									
		SCORE	6	6	13	2	9	14	19	15	18	10	24	9	6	5	12	13	8	15	8	0	7	2	8	12	4

Scoring Interpretation

0 to 5	Inadequate evidence for anaerobic biodegradation* of chlorinated organics
6 to 14	Limited evidence for anaerobic biodegradation* of chlorinated organics
15 to 20	Adequate evidence for anaerobic biodegradation* of chlorinated organics
>20	Strong evidence for anaerobic biodegradation* of chlorinated organics
*reductive dechlorination	

Values Taken from EPA Document EPA/600/R-98/128, Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water, 1998, Table 2.3 and Table 2.4

- Notes:
 1. ND=not detected
 2. NT=not tested

ATTACHMENT A

TESTAMERICA ANALYTICAL LABORATORY REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-59867-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

5/29/2014 3:45:56 PM

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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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Job ID: 480-59867-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-59867-1

Receipt

The samples were received on 5/14/2014 6:03 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-6-1-051414 (480-59867-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-6-1-051414 (480-59867-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-6-2-051414 (480-59867-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

Method(s) 6010C: The method blank for batch 183237 contained iron above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Client Sample ID: MW-6-2-051414

Lab Sample ID: 480-59867-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Iron	0.062	B	0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	44.4		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	0.30		0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	1510		10.0	5.6	mg/L	20			300.0	Total/NA
Sulfate	122		40.0	7.0	mg/L	20			300.0	Total/NA
Nitrate	0.24		0.050	0.020	mg/L	1			353.2	Total/NA
Total Organic Carbon	2.6		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	419		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	20000		1000	1000	ug/L	1			RSK-175	Total/NA

Client Sample ID: MW-6-1-051414

Lab Sample ID: 480-59867-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Methane	16		4.0	1.0	ug/L	1			RSK-175	Total/NA
Iron	11.7	B	0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	45.0		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	1.7		0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	765		10.0	5.6	mg/L	20			300.0	Total/NA
Sulfate	43.8		10.0	1.7	mg/L	5			300.0	Total/NA
Ammonia	0.35		0.020	0.0090	mg/L	1			350.1	Total/NA
Total Organic Carbon	3.9		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	422		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	32000		1000	1000	ug/L	1			RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Client Sample ID: MW-6-2-051414

Lab Sample ID: 480-59867-1

Date Collected: 05/14/14 14:00

Matrix: Water

Date Received: 05/14/14 18:03

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/19/14 12:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/14 12:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/14 12:27	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/14 12:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/14 12:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	128		66 - 137		05/19/14 12:27	1
4-Bromofluorobenzene (Surr)	98		73 - 120		05/19/14 12:27	1
Toluene-d8 (Surr)	106		71 - 126		05/19/14 12:27	1
Dibromofluoromethane (Surr)	119		60 - 140		05/19/14 12:27	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/15/14 08:39	1
Ethene	ND		7.0	1.5	ug/L			05/15/14 08:39	1
Methane	ND		4.0	1.0	ug/L			05/15/14 08:39	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	20000		1000	1000	ug/L			05/19/14 11:31	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.062	B	0.050	0.019	mg/L		05/19/14 09:45	05/20/14 15:58	1
Magnesium	44.4		0.20	0.043	mg/L		05/19/14 09:45	05/20/14 15:58	1
Manganese	0.30		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 15:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1510		10.0	5.6	mg/L			05/20/14 16:04	20
Sulfate	122		40.0	7.0	mg/L			05/20/14 16:04	20
Ammonia	ND		0.020	0.0090	mg/L			05/16/14 18:07	1
Nitrate	0.24		0.050	0.020	mg/L			05/14/14 23:12	1
Nitrite	ND		0.050	0.020	mg/L			05/14/14 23:12	1
Total Organic Carbon	2.6		1.0	0.43	mg/L			05/21/14 13:18	1
Total Alkalinity	419		5.0	0.79	mg/L			05/16/14 13:22	1
Sulfide	ND		0.10	0.052	mg/L			05/20/14 13:19	1

Client Sample ID: MW-6-1-051414

Lab Sample ID: 480-59867-2

Date Collected: 05/14/14 17:10

Matrix: Water

Date Received: 05/14/14 18:03

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/19/14 12:51	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/14 12:51	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/14 12:51	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/14 12:51	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/14 12:51	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Client Sample ID: MW-6-1-051414

Lab Sample ID: 480-59867-2

Date Collected: 05/14/14 17:10

Matrix: Water

Date Received: 05/14/14 18:03

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	126		66 - 137		05/19/14 12:51	1
4-Bromofluorobenzene (Surr)	99		73 - 120		05/19/14 12:51	1
Toluene-d8 (Surr)	105		71 - 126		05/19/14 12:51	1
Dibromofluoromethane (Surr)	120		60 - 140		05/19/14 12:51	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/15/14 08:56	1
Ethene	ND		7.0	1.5	ug/L			05/15/14 08:56	1
Methane	16		4.0	1.0	ug/L			05/15/14 08:56	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	32000		1000	1000	ug/L			05/19/14 11:40	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	11.7	B	0.050	0.019	mg/L		05/19/14 09:45	05/20/14 16:00	1
Magnesium	45.0		0.20	0.043	mg/L		05/19/14 09:45	05/20/14 16:00	1
Manganese	1.7		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 16:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	765		10.0	5.6	mg/L			05/19/14 16:50	20
Sulfate	43.8		10.0	1.7	mg/L			05/16/14 23:37	5
Ammonia	0.35		0.020	0.0090	mg/L			05/16/14 18:08	1
Nitrate	ND		0.050	0.020	mg/L			05/14/14 22:51	1
Nitrite	ND		0.050	0.020	mg/L			05/14/14 22:51	1
Total Organic Carbon	3.9		1.0	0.43	mg/L			05/22/14 00:08	1
Total Alkalinity	422		5.0	0.79	mg/L			05/16/14 13:28	1
Sulfide	ND		0.10	0.052	mg/L			05/20/14 13:22	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-59867-1	MW-6-2-051414	128	98	106	119
480-59867-2	MW-6-1-051414	126	99	105	120
LCS 480-182791/5	Lab Control Sample	120	105	109	118
MB 480-182791/7	Method Blank	128	96	105	119

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-182791/7

Matrix: Water

Analysis Batch: 182791

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/19/14 11:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/14 11:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/14 11:49	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/14 11:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/14 11:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	128		66 - 137		05/19/14 11:49	1
4-Bromofluorobenzene (Surr)	96		73 - 120		05/19/14 11:49	1
Toluene-d8 (Surr)	105		71 - 126		05/19/14 11:49	1
Dibromofluoromethane (Surr)	119		60 - 140		05/19/14 11:49	1

Lab Sample ID: LCS 480-182791/5

Matrix: Water

Analysis Batch: 182791

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	27.1		ug/L		108	74 - 124
Tetrachloroethene	25.0	26.4		ug/L		106	74 - 122
trans-1,2-Dichloroethene	25.0	27.6		ug/L		110	73 - 127
Trichloroethene	25.0	28.4		ug/L		114	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	120		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	109		71 - 126
Dibromofluoromethane (Surr)	118		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-182161/3

Matrix: Water

Analysis Batch: 182161

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/15/14 07:02	1
Ethene	ND		7.0	1.5	ug/L			05/15/14 07:02	1
Methane	ND		4.0	1.0	ug/L			05/15/14 07:02	1

Lab Sample ID: LCS 480-182161/4

Matrix: Water

Analysis Batch: 182161

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	13.0		ug/L		89	52 - 138
Ethene	13.5	11.8		ug/L		88	50 - 137
Methane	7.69	6.80		ug/L		88	48 - 174

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-182161/5

Matrix: Water

Analysis Batch: 182161

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	12.4		ug/L		85	52 - 138	5	50
Ethene	13.5	11.1		ug/L		83	50 - 137	6	50
Methane	7.69	6.51		ug/L		85	48 - 174	4	50

Lab Sample ID: MB 200-72287/3

Matrix: Water

Analysis Batch: 72287

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/19/14 10:26	1

Lab Sample ID: LCS 200-72287/2

Matrix: Water

Analysis Batch: 72287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	4720		ug/L		94	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-182756/1-A

Matrix: Water

Analysis Batch: 183237

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 182756

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0242	J	0.050	0.019	mg/L		05/19/14 09:45	05/20/14 14:43	1
Magnesium	ND		0.20	0.043	mg/L		05/19/14 09:45	05/20/14 14:43	1
Manganese	ND		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 14:43	1

Lab Sample ID: LCS 480-182756/2-A

Matrix: Water

Analysis Batch: 183237

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 182756

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.16		mg/L		102	80 - 120
Magnesium	10.0	10.25		mg/L		102	80 - 120
Manganese	0.200	0.201		mg/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-182555/52

Matrix: Water

Analysis Batch: 182555

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/16/14 23:27	1
Sulfate	ND		2.0	0.35	mg/L			05/16/14 23:27	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-182555/51

Matrix: Water

Analysis Batch: 182555

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.06		mg/L		95	90 - 110
Sulfate	20.0	19.67		mg/L		98	90 - 110

Lab Sample ID: MB 480-182869/4

Matrix: Water

Analysis Batch: 182869

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/19/14 14:59	1
Sulfate	ND		2.0	0.35	mg/L			05/19/14 14:59	1

Lab Sample ID: LCS 480-182869/3

Matrix: Water

Analysis Batch: 182869

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.03		mg/L		100	90 - 110
Sulfate	20.0	19.14		mg/L		96	90 - 110

Lab Sample ID: MB 480-183075/4

Matrix: Water

Analysis Batch: 183075

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/20/14 15:44	1
Sulfate	ND		2.0	0.35	mg/L			05/20/14 15:44	1

Lab Sample ID: LCS 480-183075/3

Matrix: Water

Analysis Batch: 183075

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	18.87		mg/L		94	90 - 110
Sulfate	20.0	19.73		mg/L		99	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-182643/3

Matrix: Water

Analysis Batch: 182643

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/16/14 17:52	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-182643/4

Matrix: Water

Analysis Batch: 182643

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-182136/3

Matrix: Water

Analysis Batch: 182136

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/14/14 23:02	1

Lab Sample ID: LCS 480-182136/4

Matrix: Water

Analysis Batch: 182136

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.58		mg/L		105	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-183891/22

Matrix: Water

Analysis Batch: 183891

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/21/14 20:48	1

Lab Sample ID: MB 480-183891/3

Matrix: Water

Analysis Batch: 183891

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/21/14 10:00	1

Lab Sample ID: LCS 480-183891/23

Matrix: Water

Analysis Batch: 183891

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	59.80		mg/L		100	90 - 110

Lab Sample ID: LCS 480-183891/4

Matrix: Water

Analysis Batch: 183891

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	62.57		mg/L		104	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 480-59867-1 MS

Matrix: Water

Analysis Batch: 183891

Client Sample ID: MW-6-2-051414

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.2		20.0	17.98		mg/L		79	54 - 131

Lab Sample ID: 480-59867-2 MS

Matrix: Water

Analysis Batch: 183891

Client Sample ID: MW-6-1-051414

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	3.9		20.0	20.12		mg/L		81	54 - 131

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-182583/29

Matrix: Water

Analysis Batch: 182583

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/16/14 12:05	1

Lab Sample ID: LCS 480-182583/30

Matrix: Water

Analysis Batch: 182583

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.56		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-183127/3

Matrix: Water

Analysis Batch: 183127

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/20/14 13:04	1

Lab Sample ID: LCS 480-183127/4

Matrix: Water

Analysis Batch: 183127

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.702		mg/L		94	90 - 110

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

GC/MS VOA

Analysis Batch: 182791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	8260C	
480-59867-2	MW-6-1-051414	Total/NA	Water	8260C	
LCS 480-182791/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-182791/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	RSK-175	
480-59867-2	MW-6-1-051414	Total/NA	Water	RSK-175	
LCS 200-72287/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72287/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 182161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	RSK-175	
480-59867-2	MW-6-1-051414	Total/NA	Water	RSK-175	
LCS 480-182161/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-182161/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-182161/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 182756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	3005A	
480-59867-2	MW-6-1-051414	Total/NA	Water	3005A	
LCS 480-182756/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-182756/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 183237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	6010C	182756
480-59867-2	MW-6-1-051414	Total/NA	Water	6010C	182756
LCS 480-182756/2-A	Lab Control Sample	Total/NA	Water	6010C	182756
MB 480-182756/1-A	Method Blank	Total/NA	Water	6010C	182756

General Chemistry

Analysis Batch: 182136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	353.2	
LCS 480-182136/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-182136/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 182138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	353.2	
480-59867-2	MW-6-1-051414	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

General Chemistry (Continued)

Analysis Batch: 182141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-2	MW-6-1-051414	Total/NA	Water	353.2	

Analysis Batch: 182555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-2	MW-6-1-051414	Total/NA	Water	300.0	
LCS 480-182555/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-182555/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 182583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	SM 2320B	
480-59867-2	MW-6-1-051414	Total/NA	Water	SM 2320B	
LCS 480-182583/30	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-182583/29	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 182643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	350.1	
480-59867-2	MW-6-1-051414	Total/NA	Water	350.1	
LCS 480-182643/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-182643/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 182869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-2	MW-6-1-051414	Total/NA	Water	300.0	
LCS 480-182869/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-182869/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 183075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	300.0	
LCS 480-183075/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-183075/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 183127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	SM 4500 S2 D	
480-59867-2	MW-6-1-051414	Total/NA	Water	SM 4500 S2 D	
LCS 480-183127/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-183127/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 183891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59867-1	MW-6-2-051414	Total/NA	Water	9060A	
480-59867-1 MS	MW-6-2-051414	Total/NA	Water	9060A	
480-59867-2	MW-6-1-051414	Total/NA	Water	9060A	
480-59867-2 MS	MW-6-1-051414	Total/NA	Water	9060A	
LCS 480-183891/23	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-183891/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-183891/22	Method Blank	Total/NA	Water	9060A	
MB 480-183891/3	Method Blank	Total/NA	Water	9060A	

TestAmerica Buffalo

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Client Sample ID: MW-6-2-051414

Lab Sample ID: 480-59867-1

Date Collected: 05/14/14 14:00

Matrix: Water

Date Received: 05/14/14 18:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	182791	05/19/14 12:27	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	72287	05/19/14 11:31	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	182161	05/15/14 08:39	DLE	TAL BUF
Total/NA	Prep	3005A			182756	05/19/14 09:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	183237	05/20/14 15:58		TAL BUF
Total/NA	Analysis	300.0		20	183075	05/20/14 16:04	KRC	TAL BUF
Total/NA	Analysis	350.1		1	182643	05/16/14 18:07	RS	TAL BUF
Total/NA	Analysis	353.2		1	182138	05/14/14 23:12	CLT	TAL BUF
Total/NA	Analysis	353.2		1	182136	05/14/14 23:12	CLT	TAL BUF
Total/NA	Analysis	9060A		1	183891	05/21/14 13:18	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	182583	05/16/14 13:22	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	183127	05/20/14 13:19	KJ1	TAL BUF

Client Sample ID: MW-6-1-051414

Lab Sample ID: 480-59867-2

Date Collected: 05/14/14 17:10

Matrix: Water

Date Received: 05/14/14 18:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	182791	05/19/14 12:51	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	72287	05/19/14 11:40	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	182161	05/15/14 08:56	DLE	TAL BUF
Total/NA	Prep	3005A			182756	05/19/14 09:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	183237	05/20/14 16:00		TAL BUF
Total/NA	Analysis	300.0		20	182869	05/19/14 16:50	KRC	TAL BUF
Total/NA	Analysis	300.0		5	182555	05/16/14 23:37	KRC	TAL BUF
Total/NA	Analysis	350.1		1	182643	05/16/14 18:08	RS	TAL BUF
Total/NA	Analysis	353.2		1	182138	05/14/14 22:51	CLT	TAL BUF
Total/NA	Analysis	353.2		1	182141	05/14/14 22:51	CLT	TAL BUF
Total/NA	Analysis	9060A		1	183891	05/22/14 00:08	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	182583	05/16/14 13:28	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	183127	05/20/14 13:22	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
West Virginia DEP	State Program	3	252	05-31-14
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16

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

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-14
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59867-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-59867-1	MW-6-2-051414	Water	05/14/14 14:00	05/14/14 18:03
480-59867-2	MW-6-1-051414	Water	05/14/14 17:10	05/14/14 18:03

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Chain of Custody Record

Client Information		Lab PM: Deyo, Melissa L		Carrier Tracking No(s):		COC No: 480-49375-13138.4	
Client Contact: Mr. Tom Bohlen		E-Mail: melissa.deyo@testamericainc.com		Page: Page 4 of 4		Job #: 52546.00	
Company: GZA GeoEnvironmental, Inc.		Address: 535 Washington Street 11th Floor		City: Buffalo		State, Zip: NY, 14203	
Phone: 4062165		PO #: 4062165		TAT Requested (days):		Preservation Codes:	
Email: thomas.bohlen@gza.com		WO #: 58507		Project #: 48004014		M - Hexane N - None O - Ash/LO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDTA Z - other (specify)	
Project Name: 058507, GM-Lockport Groundwater Sampling		SSOW#:		Due Date Requested:		Other:	
Site:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Matrix (Water, Solid, On-water, etc)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Field Filtered Sample (Yes or No)		5/14/14		1400		Water	
Perform (MS/MSD) (Yes or No)		↓		1710		Water	
Field Filled Sample (Yes or No)						Water	
350.1 - Ammonia						Water	
6010B - Metals - Fe, Mn, Mg						Water	
8290B - PCE, TCE, DCE (trans and cis), Vinyl Chloride						Water	
9080 - Total Organic Carbon						Water	
RSK_175 - Methane, Ethane, Ethene						Water	
SM4500_S2_D - Sulfide						Water	
353.2, 353.2_Nitrite, Nitrate, Calc						Water	
2220B - Total Alkalinity						Water	
300.0_28D - Anions (Chloride & Sulfate)						Water	
Total Number of Containers						Water	
Special Instructions/Note:						480-59867 Chain of Custody	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____

Relinquished by: Thomas Bohlen Date/Time: 5/14/14 1803 Company: _____

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

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

Custody Seals Intact: _____ Custody Seal No.: _____

Δ Yes Δ No



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-59867-1

Login Number: 59867

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-59867-1

Login Number: 59867

List Source: TestAmerica Burlington

List Number: 2

List Creation: 05/16/14 04:20 PM

Creator: Marion, Greg T

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877444, 467
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0,1.2°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-59964-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/3/2014 5:30:29 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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results through

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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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Qualifiers

GC/MS VOA

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.

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.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

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.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Job ID: 480-59964-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-59964-1

Receipt

The sample was received on 5/15/2014 5:46 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-8-1-051514 (480-59964-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

Method(s) 6010C: The Serial Dilution (480-59964-1 SD) in batch 480-182506, exhibited results outside the quality control limits for total magnesium and manganese. However, the Post Digestion Spike was compliant so no corrective action was necessary.

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

General Chemistry

Method(s) SM 4500 S2 D: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to sample being overdiluted when it was analyzed during primary analysis. MW-8-1-051514 (480-59964-1) This error was not caught until secondary review. Both sets of data reported.

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Client Sample ID: MW-8-1-051514

Lab Sample ID: 480-59964-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.88	J	1.0	0.81	ug/L	1		8260C	Total/NA
Ethane	14		7.5	1.5	ug/L	1		RSK-175	Total/NA
Methane	120		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.023	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	102		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.12		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1430		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	645		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	1.2		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	0.55	J	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	310		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	2.3	J	2.5	1.3	mg/L	25		SM 4500 S2 D	Total/NA
Sulfide - RA	1.4	H	0.20	0.10	mg/L	2		SM 4500 S2 D	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	18000		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Client Sample ID: MW-8-1-051514

Lab Sample ID: 480-59964-1

Date Collected: 05/15/14 16:00

Matrix: Water

Date Received: 05/15/14 17:46

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.88	J	1.0	0.81	ug/L			05/19/14 17:48	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/14 17:48	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/14 17:48	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/14 17:48	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/14 17:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		66 - 137		05/19/14 17:48	1
4-Bromofluorobenzene (Surr)	99		73 - 120		05/19/14 17:48	1
Toluene-d8 (Surr)	95		71 - 126		05/19/14 17:48	1
Dibromofluoromethane (Surr)	101		60 - 140		05/19/14 17:48	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	14		7.5	1.5	ug/L			05/16/14 12:15	1
Ethene	ND		7.0	1.5	ug/L			05/16/14 12:15	1
Methane	120		4.0	1.0	ug/L			05/16/14 12:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	18000		1000	1000	ug/L			05/19/14 11:23	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.023	J	0.050	0.019	mg/L		05/16/14 13:00	05/17/14 14:00	1
Magnesium	102		0.20	0.043	mg/L		05/16/14 13:00	05/17/14 14:00	1
Manganese	0.12		0.0030	0.00040	mg/L		05/16/14 13:00	05/17/14 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1430		10.0	5.6	mg/L			05/21/14 15:21	20
Sulfate	645		40.0	7.0	mg/L			05/21/14 15:21	20
Ammonia	1.2		0.020	0.0090	mg/L			05/16/14 18:45	1
Nitrate	ND		0.050	0.020	mg/L			05/16/14 09:48	1
Nitrite	ND		0.050	0.020	mg/L			05/16/14 09:48	1
Total Organic Carbon	0.55	J	1.0	0.43	mg/L			05/27/14 06:07	1
Total Alkalinity	310		5.0	0.79	mg/L			05/16/14 13:42	1
Sulfide	2.3	J	2.5	1.3	mg/L			05/21/14 12:20	25

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.4	H	0.20	0.10	mg/L			06/03/14 14:55	2

TestAmerica Buffalo

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-59964-1	MW-8-1-051514	98	99	95	101
LCS 480-182789/5	Lab Control Sample	105	104	97	102
LCSD 480-182789/6	Lab Control Sample Dup	111	104	98	101
MB 480-182789/8	Method Blank	98	104	97	100

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-182789/8

Matrix: Water

Analysis Batch: 182789

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/19/14 12:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/14 12:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/14 12:30	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/14 12:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/14 12:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		66 - 137		05/19/14 12:30	1
4-Bromofluorobenzene (Surr)	104		73 - 120		05/19/14 12:30	1
Toluene-d8 (Surr)	97		71 - 126		05/19/14 12:30	1
Dibromofluoromethane (Surr)	100		60 - 140		05/19/14 12:30	1

Lab Sample ID: LCS 480-182789/5

Matrix: Water

Analysis Batch: 182789

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.5		ug/L		102	74 - 124
Tetrachloroethene	25.0	25.9		ug/L		103	74 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	26.5		ug/L		106	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		66 - 137
4-Bromofluorobenzene (Surr)	104		73 - 120
Toluene-d8 (Surr)	97		71 - 126
Dibromofluoromethane (Surr)	102		60 - 140

Lab Sample ID: LCSD 480-182789/6

Matrix: Water

Analysis Batch: 182789

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	25.0	26.0		ug/L		104	74 - 124	2	15
Tetrachloroethene	25.0	26.8		ug/L		107	74 - 122	3	20
trans-1,2-Dichloroethene	25.0	25.7		ug/L		103	73 - 127	3	20
Trichloroethene	25.0	27.5		ug/L		110	74 - 123	4	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		66 - 137
4-Bromofluorobenzene (Surr)	104		73 - 120
Toluene-d8 (Surr)	98		71 - 126
Dibromofluoromethane (Surr)	101		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-182432/3

Matrix: Water

Analysis Batch: 182432

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/16/14 07:48	1
Ethene	ND		7.0	1.5	ug/L			05/16/14 07:48	1
Methane	ND		4.0	1.0	ug/L			05/16/14 07:48	1

Lab Sample ID: LCS 480-182432/4

Matrix: Water

Analysis Batch: 182432

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	11.9		ug/L		82	52 - 138
Ethene	13.5	10.9		ug/L		81	50 - 137
Methane	7.69	6.24		ug/L		81	48 - 174

Lab Sample ID: LCSD 480-182432/5

Matrix: Water

Analysis Batch: 182432

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	11.0		ug/L		76	52 - 138	8	50
Ethene	13.5	9.87		ug/L		73	50 - 137	10	50
Methane	7.69	5.86		ug/L		76	48 - 174	6	50

Lab Sample ID: MB 200-72287/3

Matrix: Water

Analysis Batch: 72287

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/19/14 10:26	1

Lab Sample ID: LCS 200-72287/2

Matrix: Water

Analysis Batch: 72287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	4720		ug/L		94	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-182506/1-A

Matrix: Water

Analysis Batch: 182811

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 182506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/16/14 13:00	05/17/14 13:55	1
Magnesium	ND		0.20	0.043	mg/L		05/16/14 13:00	05/17/14 13:55	1
Manganese	ND		0.0030	0.00040	mg/L		05/16/14 13:00	05/17/14 13:55	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-182506/2-A

Matrix: Water

Analysis Batch: 182811

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 182506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Iron	10.0	10.95		mg/L		110	80 - 120	
Magnesium	10.0	10.56		mg/L		106	80 - 120	
Manganese	0.200	0.211		mg/L		105	80 - 120	

Lab Sample ID: 480-59964-1 MS

Matrix: Water

Analysis Batch: 182811

Client Sample ID: MW-8-1-051514

Prep Type: Total/NA

Prep Batch: 182506

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Iron	0.023	J	10.0	9.48		mg/L		95	75 - 125	
Magnesium	102		10.0	109.9	4	mg/L		83	75 - 125	
Manganese	0.12		0.200	0.309		mg/L		93	75 - 125	

Lab Sample ID: 480-59964-1 MSD

Matrix: Water

Analysis Batch: 182811

Client Sample ID: MW-8-1-051514

Prep Type: Total/NA

Prep Batch: 182506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
									Limits		RPD	Limit
Iron	0.023	J	10.0	10.13		mg/L		101	75 - 125	7	20	
Magnesium	102		10.0	118.8	4	mg/L		172	75 - 125	8	20	
Manganese	0.12		0.200	0.334		mg/L		105	75 - 125	8	20	

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-183351/4

Matrix: Water

Analysis Batch: 183351

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	ND		0.50	0.28	mg/L			05/21/14 15:11	1
Sulfate	ND		2.0	0.35	mg/L			05/21/14 15:11	1

Lab Sample ID: LCS 480-183351/3

Matrix: Water

Analysis Batch: 183351

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Chloride	20.0	19.37		mg/L		97	90 - 110	
Sulfate	20.0	20.66		mg/L		103	90 - 110	

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-182643/27

Matrix: Water

Analysis Batch: 182643

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ammonia	ND		0.020	0.0090	mg/L			05/16/14 18:15	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-182643/51
 Matrix: Water
 Analysis Batch: 182643

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/16/14 18:38	1

Lab Sample ID: LCS 480-182643/28
 Matrix: Water
 Analysis Batch: 182643

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Lab Sample ID: LCS 480-182643/52
 Matrix: Water
 Analysis Batch: 182643

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-184514/18
 Matrix: Water
 Analysis Batch: 184514

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/26/14 23:50	1

Lab Sample ID: LCS 480-184514/19
 Matrix: Water
 Analysis Batch: 184514

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	58.82		mg/L		98	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-182583/29
 Matrix: Water
 Analysis Batch: 182583

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/16/14 12:05	1

Lab Sample ID: LCS 480-182583/30
 Matrix: Water
 Analysis Batch: 182583

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.56		mg/L		95	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-183372/3

Matrix: Water

Analysis Batch: 183372

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/21/14 12:07	1

Lab Sample ID: LCS 480-183372/4

Matrix: Water

Analysis Batch: 183372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.750		mg/L		100	90 - 110

Lab Sample ID: 480-59964-1 MS

Matrix: Water

Analysis Batch: 183372

Client Sample ID: MW-8-1-051514

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	2.3	J	25.0	25.53		mg/L		93	90 - 110

Lab Sample ID: 480-59964-1 MSD

Matrix: Water

Analysis Batch: 183372

Client Sample ID: MW-8-1-051514

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfide	2.3	J	25.0	25.67		mg/L		93	90 - 110	1	20

Lab Sample ID: MB 480-185455/65

Matrix: Water

Analysis Batch: 185455

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 14:33	1

Lab Sample ID: LCS 480-185455/66

Matrix: Water

Analysis Batch: 185455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.722		mg/L		96	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

GC/MS VOA

Analysis Batch: 182789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	8260C	
LCS 480-182789/5	Lab Control Sample	Total/NA	Water	8260C	
LCS 480-182789/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-182789/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	RSK-175	
LCS 200-72287/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72287/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 182432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	RSK-175	
LCS 480-182432/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-182432/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-182432/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 182506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	3005A	
480-59964-1 MS	MW-8-1-051514	Total/NA	Water	3005A	
480-59964-1 MSD	MW-8-1-051514	Total/NA	Water	3005A	
LCS 480-182506/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-182506/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 182811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	6010C	182506
480-59964-1 MS	MW-8-1-051514	Total/NA	Water	6010C	182506
480-59964-1 MSD	MW-8-1-051514	Total/NA	Water	6010C	182506
LCS 480-182506/2-A	Lab Control Sample	Total/NA	Water	6010C	182506
MB 480-182506/1-A	Method Blank	Total/NA	Water	6010C	182506

General Chemistry

Analysis Batch: 182583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	SM 2320B	
LCS 480-182583/30	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-182583/29	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 182588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

General Chemistry (Continued)

Analysis Batch: 182590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	353.2	

Analysis Batch: 182643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	350.1	
LCS 480-182643/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-182643/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-182643/27	Method Blank	Total/NA	Water	350.1	
MB 480-182643/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 183351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	300.0	
LCS 480-183351/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-183351/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 183372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	SM 4500 S2 D	
480-59964-1 MS	MW-8-1-051514	Total/NA	Water	SM 4500 S2 D	
480-59964-1 MSD	MW-8-1-051514	Total/NA	Water	SM 4500 S2 D	
LCS 480-183372/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-183372/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 184514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1	MW-8-1-051514	Total/NA	Water	9060A	
LCS 480-184514/19	Lab Control Sample	Total/NA	Water	9060A	
MB 480-184514/18	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-59964-1 - RA	MW-8-1-051514	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/66	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/65	Method Blank	Total/NA	Water	SM 4500 S2 D	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Client Sample ID: MW-8-1-051514

Lab Sample ID: 480-59964-1

Date Collected: 05/15/14 16:00

Matrix: Water

Date Received: 05/15/14 17:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	182789	05/19/14 17:48	LCH	TAL BUF
Total/NA	Analysis	RSK-175		1	72287	05/19/14 11:23	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	182432	05/16/14 12:15	MAN	TAL BUF
Total/NA	Prep	3005A			182506	05/16/14 13:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	182811	05/17/14 14:00	LMH	TAL BUF
Total/NA	Analysis	300.0		20	183351	05/21/14 15:21	KRC	TAL BUF
Total/NA	Analysis	350.1		1	182643	05/16/14 18:45	RS	TAL BUF
Total/NA	Analysis	353.2		1	182588	05/16/14 09:48	KMF	TAL BUF
Total/NA	Analysis	353.2		1	182590	05/16/14 09:48	KMF	TAL BUF
Total/NA	Analysis	9060A		1	184514	05/27/14 06:07	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	182583	05/16/14 13:42	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		25	183372	05/21/14 12:20	KJ1	TAL BUF
Total/NA	Analysis	SM 4500 S2 D	RA	2	185455	06/03/14 14:55	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

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

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-59964-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-59964-1	MW-8-1-051514	Water	05/15/14 16:00	05/15/14 17:46

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Chain of Custody Record

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Client Information Client Contact: Mr. Tom Bohlen Company: GZA GeoEnvironmental, Inc. Address: 535 Washington Street 11th Floor City: Buffalo State, Zip: NY, 14203 Phone: 4062165 Email: thomas.bohlen@gza.com Project Name: 058507, GM-Lockport Groundwater Sampling Site:			Lab PM: Deyo, Melissa L E-Mail: melissa.deyo@testamericainc.com Camer Tracking No(s): Job #: 56546		C-400-49375-13138.4 Page: 4 of 4		
Due Date Requested: TAT Requested (days): FO #: WO #: Project #: SSOW#:			Analysis Requested RSK_175 - Metals - Fe, Mn, Mg RSK_175 - Total Organic Carbon RSK_175 - Methane, Ethane, Ethene SM4500_S2_D - Sulfide 353.2, 353.2 Nitrite, Nitrate Calc 2220B - Total Alkalinity 300.0_2BD - Anions (Chloride & Sulfate)				
Sample Identification MW-8-1-057574			Total Number of Containers:				
Sample Date 5/15/14 1600			Special Instructions/Note:				
Sample Time 1600			Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)				
Matrix (W=water, S=solid, O=other)			Special Instructions/Note: 480-59964 Chain of Custody				
Sample Type (C=comp, G=grab)			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Method of Shipment:				
Relinquished by: Thomas Bohlen			Received by: [Signature]				
Relinquished by:			Date/Time: 5/15/14 1746				
Relinquished by:			Date/Time:				
Custody Seals Intact: A Yes B No			Date/Time:				
Custody Seal No.			Cooler Temperature(s) °C and Other Remarks: #2 3.5				



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-59964-1

Login Number: 59964

List Source: TestAmerica Buffalo

List Number: 1

Creator: Robison, Zachary J

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	TA
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-59964-1

Login Number: 59964

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 05/17/14 01:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877474
Sample custody seals, if present, are intact.	N/A	
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	2.8°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60304-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/6/2014 11:04:53 AM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Qualifiers

General Chemistry

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.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Job ID: 480-60304-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60304-1

Receipt

The sample was received on 5/21/2014 4:05 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-9-12-052114 (480-60304-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-9-12-052114 (480-60304-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

Method(s) SM 2320B: The method blank for batch 183737 contained alkalinity above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. MW-9-12-052114 (480-60304-1)

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Client Sample ID: MW-9-12-052114

Lab Sample ID: 480-60304-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Methane	14		4.0	1.0	ug/L			1	RSK-175	Total/NA
Iron	0.82		0.050	0.019	mg/L			1	6010C	Total/NA
Magnesium	46.9		0.20	0.043	mg/L			1	6010C	Total/NA
Manganese	0.26		0.0030	0.00040	mg/L			1	6010C	Total/NA
Chloride	1040		25.0	14.1	mg/L			50	300.0	Total/NA
Sulfate	186		10.0	1.7	mg/L			5	300.0	Total/NA
Ammonia	0.023		0.020	0.0090	mg/L			1	350.1	Total/NA
Nitrate	1.7		0.050	0.020	mg/L			1	353.2	Total/NA
Nitrite	0.026	J	0.050	0.020	mg/L			1	353.2	Total/NA
Total Organic Carbon	1.7		1.0	0.43	mg/L			1	9060A	Total/NA
Total Alkalinity	271	B	5.0	0.79	mg/L			1	SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	5400		1000	1000	ug/L			1	RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Client Sample ID: MW-9-12-052114

Lab Sample ID: 480-60304-1

Date Collected: 05/21/14 12:15

Matrix: Water

Date Received: 05/21/14 16:05

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/27/14 13:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/27/14 13:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/27/14 13:50	1
Trichloroethene	ND		1.0	0.46	ug/L			05/27/14 13:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/27/14 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		66 - 137		05/27/14 13:50	1
4-Bromofluorobenzene (Surr)	102		73 - 120		05/27/14 13:50	1
Toluene-d8 (Surr)	96		71 - 126		05/27/14 13:50	1
Dibromofluoromethane (Surr)	100		60 - 140		05/27/14 13:50	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/22/14 12:32	1
Ethene	ND		7.0	1.5	ug/L			05/22/14 12:32	1
Methane	14		4.0	1.0	ug/L			05/22/14 12:32	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	5400		1000	1000	ug/L			05/30/14 10:56	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.82		0.050	0.019	mg/L		05/22/14 09:25	05/27/14 17:16	1
Magnesium	46.9		0.20	0.043	mg/L		05/22/14 09:25	05/27/14 17:16	1
Manganese	0.26		0.0030	0.00040	mg/L		05/22/14 09:25	05/27/14 17:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1040		25.0	14.1	mg/L			05/27/14 17:05	50
Sulfate	186		10.0	1.7	mg/L			05/23/14 04:25	5
Ammonia	0.023		0.020	0.0090	mg/L			05/28/14 17:06	1
Nitrate	1.7		0.050	0.020	mg/L			05/22/14 00:11	1
Nitrite	0.026	J	0.050	0.020	mg/L			05/22/14 00:11	1
Total Organic Carbon	1.7		1.0	0.43	mg/L			05/27/14 20:53	1
Total Alkalinity	271	B	5.0	0.79	mg/L			05/22/14 13:38	1
Sulfide	ND		0.10	0.052	mg/L			05/24/14 10:20	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-60304-1	MW-9-12-052114	106	102	96	100
LCS 480-184106/5	Lab Control Sample	106	102	95	104
MB 480-184106/8	Method Blank	104	101	96	101

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-184106/8

Matrix: Water

Analysis Batch: 184106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/27/14 11:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/27/14 11:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/27/14 11:52	1
Trichloroethene	ND		1.0	0.46	ug/L			05/27/14 11:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/27/14 11:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		05/27/14 11:52	1
4-Bromofluorobenzene (Surr)	101		73 - 120		05/27/14 11:52	1
Toluene-d8 (Surr)	96		71 - 126		05/27/14 11:52	1
Dibromofluoromethane (Surr)	101		60 - 140		05/27/14 11:52	1

Lab Sample ID: LCS 480-184106/5

Matrix: Water

Analysis Batch: 184106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	21.9		ug/L		88	74 - 124
Tetrachloroethene	25.0	23.2		ug/L		93	74 - 122
trans-1,2-Dichloroethene	25.0	21.6		ug/L		86	73 - 127
Trichloroethene	25.0	22.2		ug/L		89	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Toluene-d8 (Surr)	95		71 - 126
Dibromofluoromethane (Surr)	104		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-183483/2

Matrix: Water

Analysis Batch: 183483

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/22/14 06:49	1
Ethene	ND		7.0	1.5	ug/L			05/22/14 06:49	1
Methane	ND		4.0	1.0	ug/L			05/22/14 06:49	1

Lab Sample ID: LCS 480-183483/3

Matrix: Water

Analysis Batch: 183483

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	15.6		ug/L		107	52 - 138
Ethene	13.5	14.5		ug/L		108	50 - 137
Methane	7.69	8.32		ug/L		108	48 - 174

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-183483/4

Matrix: Water

Analysis Batch: 183483

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	15.8		ug/L		108	52 - 138	1	50
Ethene	13.5	14.4		ug/L		107	50 - 137	1	50
Methane	7.69	8.50		ug/L		110	48 - 174	2	50

Lab Sample ID: MB 200-72853/3

Matrix: Water

Analysis Batch: 72853

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/30/14 10:32	1

Lab Sample ID: LCS 200-72853/2

Matrix: Water

Analysis Batch: 72853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	4400		ug/L		88	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-183487/1-A

Matrix: Water

Analysis Batch: 185244

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 183487

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/22/14 09:25	05/27/14 16:40	1
Magnesium	ND		0.20	0.043	mg/L		05/22/14 09:25	05/27/14 16:40	1
Manganese	ND		0.0030	0.00040	mg/L		05/22/14 09:25	05/27/14 16:40	1

Lab Sample ID: LCS 480-183487/2-A

Matrix: Water

Analysis Batch: 185244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 183487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.98		mg/L		100	80 - 120
Magnesium	10.0	10.22		mg/L		102	80 - 120
Manganese	0.200	0.200		mg/L		100	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-183574/76

Matrix: Water

Analysis Batch: 183574

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/23/14 02:33	1
Sulfate	ND		2.0	0.35	mg/L			05/23/14 02:33	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-183574/75
Matrix: Water
Analysis Batch: 183574

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.17		mg/L		101	90 - 110
Sulfate	20.0	19.37		mg/L		97	90 - 110

Lab Sample ID: MB 480-184170/4
Matrix: Water
Analysis Batch: 184170

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/27/14 15:13	1
Sulfate	ND		2.0	0.35	mg/L			05/27/14 15:13	1

Lab Sample ID: LCS 480-184170/3
Matrix: Water
Analysis Batch: 184170

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.75		mg/L		99	90 - 110
Sulfate	20.0	20.18		mg/L		101	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-184467/12
Matrix: Water
Analysis Batch: 184467

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 16:43	1

Lab Sample ID: MB 480-184467/36
Matrix: Water
Analysis Batch: 184467

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 17:04	1

Lab Sample ID: MB 480-184467/60
Matrix: Water
Analysis Batch: 184467

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 17:25	1

Lab Sample ID: LCS 480-184467/13
Matrix: Water
Analysis Batch: 184467

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-184467/37
 Matrix: Water
 Analysis Batch: 184467

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Lab Sample ID: LCS 480-184467/61
 Matrix: Water
 Analysis Batch: 184467

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-183454/51
 Matrix: Water
 Analysis Batch: 183454

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/21/14 23:55	1

Lab Sample ID: LCS 480-183454/52
 Matrix: Water
 Analysis Batch: 183454

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.55		mg/L		103	90 - 110

Lab Sample ID: 480-60304-1 MS
 Matrix: Water
 Analysis Batch: 183454

Client Sample ID: MW-9-12-052114
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	0.026	J	1.00	0.158	F1	mg/L		13	90 - 110

Lab Sample ID: 480-60304-1 DU
 Matrix: Water
 Analysis Batch: 183454

Client Sample ID: MW-9-12-052114
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite	0.026	J	1.00	0.0222	J	mg/L		16	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-184516/3
 Matrix: Water
 Analysis Batch: 184516

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/27/14 12:42	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-184516/4
 Matrix: Water
 Analysis Batch: 184516

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	59.21		mg/L		99	90 - 110

Lab Sample ID: 480-60304-1 DU
 Matrix: Water
 Analysis Batch: 184516

Client Sample ID: MW-9-12-052114
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	1.7		1.75		mg/L		0.2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-183737/6
 Matrix: Water
 Analysis Batch: 183737

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.27	J	5.0	0.79	mg/L			05/22/14 13:25	1

Lab Sample ID: LCS 480-183737/7
 Matrix: Water
 Analysis Batch: 183737

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	91.52		mg/L		92	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-183997/3
 Matrix: Water
 Analysis Batch: 183997

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/24/14 10:20	1

Lab Sample ID: LCS 480-183997/4
 Matrix: Water
 Analysis Batch: 183997

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.805		mg/L		107	90 - 110

Lab Sample ID: 480-60304-1 MS
 Matrix: Water
 Analysis Batch: 183997

Client Sample ID: MW-9-12-052114
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.461		mg/L		92	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 480-60304-1 MSD
 Matrix: Water
 Analysis Batch: 183997

Client Sample ID: MW-9-12-052114
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND		0.500	0.458		mg/L		92	90 - 110	1	20

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

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

GC/MS VOA

Analysis Batch: 184106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	8260C	
LCS 480-184106/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-184106/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	RSK-175	
LCS 200-72853/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72853/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 183483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	RSK-175	
LCS 480-183483/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-183483/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-183483/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 183487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	3005A	
LCS 480-183487/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-183487/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	6010C	183487
LCS 480-183487/2-A	Lab Control Sample	Total/NA	Water	6010C	183487
MB 480-183487/1-A	Method Blank	Total/NA	Water	6010C	183487

General Chemistry

Analysis Batch: 183454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	353.2	
480-60304-1 DU	MW-9-12-052114	Total/NA	Water	353.2	
480-60304-1 MS	MW-9-12-052114	Total/NA	Water	353.2	
LCS 480-183454/52	Lab Control Sample	Total/NA	Water	353.2	
MB 480-183454/51	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 183456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	353.2	

Analysis Batch: 183574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	300.0	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

General Chemistry (Continued)

Analysis Batch: 183574 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-183574/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-183574/76	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 183737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	SM 2320B	
LCS 480-183737/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-183737/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 183997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	SM 4500 S2 D	
480-60304-1 MS	MW-9-12-052114	Total/NA	Water	SM 4500 S2 D	
480-60304-1 MSD	MW-9-12-052114	Total/NA	Water	SM 4500 S2 D	
LCS 480-183997/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-183997/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 184170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	300.0	
LCS 480-184170/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-184170/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 184467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	350.1	
LCS 480-184467/13	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184467/37	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184467/61	Lab Control Sample	Total/NA	Water	350.1	
MB 480-184467/12	Method Blank	Total/NA	Water	350.1	
MB 480-184467/36	Method Blank	Total/NA	Water	350.1	
MB 480-184467/60	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 184516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60304-1	MW-9-12-052114	Total/NA	Water	9060A	
480-60304-1 DU	MW-9-12-052114	Total/NA	Water	9060A	
LCS 480-184516/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-184516/3	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Client Sample ID: MW-9-12-052114

Lab Sample ID: 480-60304-1

Date Collected: 05/21/14 12:15

Matrix: Water

Date Received: 05/21/14 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	184106	05/27/14 13:50	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	72853	05/30/14 10:56	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	183483	05/22/14 12:32	DLE	TAL BUF
Total/NA	Prep	3005A			183487	05/22/14 09:25	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185244	05/27/14 17:16	JRK	TAL BUF
Total/NA	Analysis	300.0		5	183574	05/23/14 04:25	KRC	TAL BUF
Total/NA	Analysis	300.0		50	184170	05/27/14 17:05	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184467	05/28/14 17:06	RS	TAL BUF
Total/NA	Analysis	353.2		1	183456	05/22/14 00:11	RS	TAL BUF
Total/NA	Analysis	353.2		1	183454	05/22/14 00:11	RS	TAL BUF
Total/NA	Analysis	9060A		1	184516	05/27/14 20:53	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	183737	05/22/14 13:38	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	183997	05/24/14 10:20	EGS	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60304-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60304-1	MW-9-12-052114	Water	05/21/14 12:15	05/21/14 16:05

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TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2298
 Phone (716) 891-2600 Fax (716) 691-7991

Chain of Custody



estAmerica
 FIELD LABORATORY SERVICES

Client Information
 Client Contact: Mr. Tom Bohlen
 Company: GZA GeoEnvironmental, Inc.
 Address: 535 Washington Street 11th Floor
 City: Buffalo
 State, Zip: NY, 14203
 Phone: 4062165
 Email: thomas.bohlen@gza.com
 Project Name: 058507, GM-Lockport Groundwater Sampling
 Site: SSOW#

Sampler: T. Bohlen
 Lab PM: Deyo, Melissa L
 Phone: 416-685-2300
 E-Mail: melissa.deyo@testamericainc.com

IC No: 0-49375-13138.4
 Page 4 of 4
 Job #: 480-60304 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Newswater, Solid, Overwater, BT-Tissue, A=AP)	Analysis Requested	Special Instructions/Note:
MW-9-12-052014	5/11/14	16:05	G	Water	RSK_175_CO2 - Carbon dioxide 350_1 - Ammonia 6010B - Metals - Fe, Mn, Mg 8260B - PCE, TCE, DCE (trans and cis), Vinyl Chloride 9060 - Total Organic Carbon RSK_175 - Methane, Ethane, Ethene SM4500_S2_D - Sulfide 333_2, 353_2 Nitrite, Nitrate, Calc 2320B - Total Alkalinity 300_0_28D - Anions (Chloride & Sulfate)	Special Instructions/Note: Total Number of Containers: 1
				Water		
				Water		
				Water		
				Water		
				Water		
				Water		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *Thomas Bohlen* Date/Time: 5/11/14 16:05 Company: GZA
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal No. _____
 Custody Seal Intact: Yes No
 Cooler Temperature(s): C and Other Remarks: 3.4

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60304-1

Login Number: 60304

List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60304-1

Login Number: 60304

List Number: 2

Creator: Lavigne, Scott M

List Source: TestAmerica Burlington

List Creation: 05/23/14 02:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877514,515,516
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2C°,2.2C°,3.0C°/IR GUN ID 181.CF=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60398-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/10/2014 2:02:34 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Qualifiers

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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Job ID: 480-60398-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60398-1

Receipt

The samples were received on 5/22/2014 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

GC/MS VOA

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-10-2-052214 (480-60398-3). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-10-2-052214 (480-60398-3), MW-10-3-052214 (480-60398-2), MW-9-101A-052214 (480-60398-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

Method(s) 6010C: The Low Level Continuing Calibration Blank, CCVL 480-184070/19, for analytical batch 184070 contained total iron, and manganese above the reporting limit (RL). The associated samples (LCS 480-183728/2-A) contained detects for this analyte at concentrations greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The Low level Continuing Calibration Verification, CCVL 480-184070/19 recovered above the upper control limit for total iron, and manganese. The sample (MB 480-183728/1-A) associated with this CCVL was non-detect for the affected analytes; therefore, the data have been reported.

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

General Chemistry

Method(s) SM 2320B: The method blank for batch 184000 contained alkalinity above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. MW-10-2-052214 (480-60398-3), MW-10-3-052214 (480-60398-2), MW-9-101A-052214 (480-60398-1)

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Client Sample ID: MW-9-101A-052214

Lab Sample ID: 480-60398-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.027	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	150		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0029	J	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1710		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	1420		40.0	7.0	mg/L	20		300.0	Total/NA
Nitrate	9.1		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	5.2		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	205	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	5300		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-10-3-052214

Lab Sample ID: 480-60398-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	11		1.0	0.81	ug/L	1		8260C	Total/NA
Tetrachloroethene	14		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	9.0		1.0	0.46	ug/L	1		8260C	Total/NA
Iron	0.021	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	21.5		0.20	0.043	mg/L	1		6010C	Total/NA
Chloride	88.2		0.50	0.28	mg/L	1		300.0	Total/NA
Sulfate	136		10.0	1.7	mg/L	5		300.0	Total/NA
Nitrate	1.7		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.5		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	144	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	1200		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-10-2-052214

Lab Sample ID: 480-60398-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	83		1.0	0.36	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	24		1.0	0.90	ug/L	1		8260C	Total/NA
Vinyl chloride	70		1.0	0.90	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene - DL	1900		20	16	ug/L	20		8260C	Total/NA
Trichloroethene - DL	240		20	9.2	ug/L	20		8260C	Total/NA
Methane	15		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.12		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	75.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.11		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1740		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	268		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.49		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.063		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.0		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	305	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	9700		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Client Sample ID: MW-9-101A-052214

Lab Sample ID: 480-60398-1

Date Collected: 05/22/14 09:35

Matrix: Water

Date Received: 05/22/14 16:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/31/14 14:38	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/31/14 14:38	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/31/14 14:38	1
Trichloroethene	ND		1.0	0.46	ug/L			05/31/14 14:38	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/31/14 14:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	127		66 - 137		05/31/14 14:38	1
4-Bromofluorobenzene (Surr)	92		73 - 120		05/31/14 14:38	1
Toluene-d8 (Surr)	101		71 - 126		05/31/14 14:38	1
Dibromofluoromethane (Surr)	123		60 - 140		05/31/14 14:38	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/23/14 15:58	1
Ethene	ND		7.0	1.5	ug/L			05/23/14 15:58	1
Methane	ND		4.0	1.0	ug/L			05/23/14 15:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	5300		1000	1000	ug/L			06/02/14 11:52	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.027	J	0.050	0.019	mg/L		05/23/14 10:00	05/23/14 21:42	1
Magnesium	150		0.20	0.043	mg/L		05/23/14 10:00	05/23/14 21:42	1
Manganese	0.0029	J	0.0030	0.00040	mg/L		05/23/14 10:00	05/23/14 21:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1710		10.0	5.6	mg/L			05/27/14 21:08	20
Sulfate	1420		40.0	7.0	mg/L			05/27/14 21:08	20
Ammonia	ND		0.020	0.0090	mg/L			05/27/14 20:31	1
Nitrate	9.1		0.050	0.020	mg/L			05/23/14 00:16	1
Nitrite	ND		0.050	0.020	mg/L			05/23/14 00:16	1
Total Organic Carbon	5.2		1.0	0.43	mg/L			05/29/14 11:20	1
Total Alkalinity	205	B	5.0	0.79	mg/L			05/23/14 19:44	1
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Client Sample ID: MW-10-3-052214

Lab Sample ID: 480-60398-2

Date Collected: 05/22/14 12:35

Matrix: Water

Date Received: 05/22/14 16:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	11		1.0	0.81	ug/L			05/31/14 15:02	1
Tetrachloroethene	14		1.0	0.36	ug/L			05/31/14 15:02	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/31/14 15:02	1
Trichloroethene	9.0		1.0	0.46	ug/L			05/31/14 15:02	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/31/14 15:02	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Client Sample ID: MW-10-3-052214

Lab Sample ID: 480-60398-2

Date Collected: 05/22/14 12:35

Matrix: Water

Date Received: 05/22/14 16:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	130		66 - 137		05/31/14 15:02	1
4-Bromofluorobenzene (Surr)	90		73 - 120		05/31/14 15:02	1
Toluene-d8 (Surr)	102		71 - 126		05/31/14 15:02	1
Dibromofluoromethane (Surr)	120		60 - 140		05/31/14 15:02	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/23/14 16:29	1
Ethene	ND		7.0	1.5	ug/L			05/23/14 16:29	1
Methane	ND		4.0	1.0	ug/L			05/23/14 16:29	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	1200		1000	1000	ug/L			06/02/14 12:00	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.021	J	0.050	0.019	mg/L		05/23/14 10:00	05/23/14 21:45	1
Magnesium	21.5		0.20	0.043	mg/L		05/23/14 10:00	05/23/14 21:45	1
Manganese	ND		0.0030	0.00040	mg/L		05/23/14 10:00	05/23/14 21:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88.2		0.50	0.28	mg/L			05/24/14 12:39	1
Sulfate	136		10.0	1.7	mg/L			05/27/14 21:18	5
Ammonia	ND		0.020	0.0090	mg/L			05/27/14 20:32	1
Nitrate	1.7		0.050	0.020	mg/L			05/23/14 00:18	1
Nitrite	ND		0.050	0.020	mg/L			05/23/14 00:18	1
Total Organic Carbon	1.5		1.0	0.43	mg/L			06/02/14 16:13	1
Total Alkalinity	144	B	5.0	0.79	mg/L			05/23/14 19:50	1
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Client Sample ID: MW-10-2-052214

Lab Sample ID: 480-60398-3

Date Collected: 05/22/14 15:20

Matrix: Water

Date Received: 05/22/14 16:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	83		1.0	0.36	ug/L			05/31/14 15:26	1
trans-1,2-Dichloroethene	24		1.0	0.90	ug/L			05/31/14 15:26	1
Vinyl chloride	70		1.0	0.90	ug/L			05/31/14 15:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	128		66 - 137		05/31/14 15:26	1
4-Bromofluorobenzene (Surr)	91		73 - 120		05/31/14 15:26	1
Toluene-d8 (Surr)	102		71 - 126		05/31/14 15:26	1
Dibromofluoromethane (Surr)	126		60 - 140		05/31/14 15:26	1

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1900		20	16	ug/L			06/03/14 02:16	20
Trichloroethene	240		20	9.2	ug/L			06/03/14 02:16	20

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Client Sample ID: MW-10-2-052214

Lab Sample ID: 480-60398-3

Date Collected: 05/22/14 15:20

Matrix: Water

Date Received: 05/22/14 16:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		66 - 137		06/03/14 02:16	20
4-Bromofluorobenzene (Surr)	96		73 - 120		06/03/14 02:16	20
Toluene-d8 (Surr)	107		71 - 126		06/03/14 02:16	20
Dibromofluoromethane (Surr)	112		60 - 140		06/03/14 02:16	20

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/23/14 16:47	1
Ethene	ND		7.0	1.5	ug/L			05/23/14 16:47	1
Methane	15		4.0	1.0	ug/L			05/23/14 16:47	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	9700		1000	1000	ug/L			06/02/14 12:07	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.12		0.050	0.019	mg/L		05/23/14 10:00	05/23/14 21:47	1
Magnesium	75.0		0.20	0.043	mg/L		05/23/14 10:00	05/23/14 21:47	1
Manganese	0.11		0.0030	0.00040	mg/L		05/23/14 10:00	05/23/14 21:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1740		10.0	5.6	mg/L			05/27/14 21:28	20
Sulfate	268		40.0	7.0	mg/L			05/27/14 21:28	20
Ammonia	0.49		0.020	0.0090	mg/L			05/28/14 17:31	1
Nitrate	0.063		0.050	0.020	mg/L			05/23/14 00:19	1
Nitrite	ND		0.050	0.020	mg/L			05/23/14 00:19	1
Total Organic Carbon	2.0		1.0	0.43	mg/L			05/29/14 12:16	1
Total Alkalinity	305 B		5.0	0.79	mg/L			05/23/14 19:56	1
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60398-1	MW-9-101A-052214	127	92	101	123
480-60398-2	MW-10-3-052214	130	90	102	120
480-60398-3	MW-10-2-052214	128	91	102	126
480-60398-3 - DL	MW-10-2-052214	113	96	107	112
LCS 480-185012/6	Lab Control Sample	115	104	106	112
LCS 480-185288/5	Lab Control Sample	110	106	106	113
MB 480-185012/8	Method Blank	125	93	102	119
MB 480-185288/7	Method Blank	115	98	110	110

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-185012/8

Matrix: Water

Analysis Batch: 185012

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/31/14 12:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/31/14 12:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/31/14 12:27	1
Trichloroethene	ND		1.0	0.46	ug/L			05/31/14 12:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/31/14 12:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	125		66 - 137		05/31/14 12:27	1
4-Bromofluorobenzene (Surr)	93		73 - 120		05/31/14 12:27	1
Toluene-d8 (Surr)	102		71 - 126		05/31/14 12:27	1
Dibromofluoromethane (Surr)	119		60 - 140		05/31/14 12:27	1

Lab Sample ID: LCS 480-185012/6

Matrix: Water

Analysis Batch: 185012

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	24.9		ug/L		100	74 - 124
Tetrachloroethene	25.0	25.2		ug/L		101	74 - 122
trans-1,2-Dichloroethene	25.0	25.6		ug/L		103	73 - 127
Trichloroethene	25.0	25.3		ug/L		101	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
4-Bromofluorobenzene (Surr)	104		73 - 120
Toluene-d8 (Surr)	106		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

Lab Sample ID: MB 480-185288/7

Matrix: Water

Analysis Batch: 185288

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/02/14 23:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/02/14 23:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/02/14 23:30	1
Trichloroethene	ND		1.0	0.46	ug/L			06/02/14 23:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/02/14 23:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		66 - 137		06/02/14 23:30	1
4-Bromofluorobenzene (Surr)	98		73 - 120		06/02/14 23:30	1
Toluene-d8 (Surr)	110		71 - 126		06/02/14 23:30	1
Dibromofluoromethane (Surr)	110		60 - 140		06/02/14 23:30	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-185288/5

Matrix: Water

Analysis Batch: 185288

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	27.2		ug/L		109	74 - 124
Tetrachloroethene	25.0	23.5		ug/L		94	74 - 122
trans-1,2-Dichloroethene	25.0	27.0		ug/L		108	73 - 127
Trichloroethene	25.0	26.6		ug/L		106	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
4-Bromofluorobenzene (Surr)	106		73 - 120
Toluene-d8 (Surr)	106		71 - 126
Dibromofluoromethane (Surr)	113		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-183754/25

Matrix: Water

Analysis Batch: 183754

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/23/14 10:25	1
Ethene	ND		7.0	1.5	ug/L			05/23/14 10:25	1
Methane	ND		4.0	1.0	ug/L			05/23/14 10:25	1

Lab Sample ID: LCS 480-183754/26

Matrix: Water

Analysis Batch: 183754

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	12.1		ug/L		83	52 - 138
Ethene	13.5	11.1		ug/L		83	50 - 137
Methane	7.69	6.66		ug/L		87	48 - 174

Lab Sample ID: LCSD 480-183754/27

Matrix: Water

Analysis Batch: 183754

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	13.5		ug/L		93	52 - 138	11	50
Ethene	13.5	12.4		ug/L		92	50 - 137	11	50
Methane	7.69	7.51		ug/L		98	48 - 174	12	50

Lab Sample ID: MB 200-72919/3

Matrix: Water

Analysis Batch: 72919

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/02/14 11:14	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 200-72919/2
 Matrix: Water
 Analysis Batch: 72919

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5340		ug/L		107	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-183728/1-A
 Matrix: Water
 Analysis Batch: 184070

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 183728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND	^	0.050	0.019	mg/L		05/23/14 10:00	05/23/14 20:34	1
Magnesium	ND		0.20	0.043	mg/L		05/23/14 10:00	05/23/14 20:34	1
Manganese	ND	^	0.0030	0.00040	mg/L		05/23/14 10:00	05/23/14 20:34	1

Lab Sample ID: LCS 480-183728/2-A
 Matrix: Water
 Analysis Batch: 184070

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 183728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.53	^	mg/L		105	80 - 120
Magnesium	10.0	11.11		mg/L		111	80 - 120
Manganese	0.200	0.218	^	mg/L		109	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-183860/124
 Matrix: Water
 Analysis Batch: 183860

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/24/14 11:49	1
Sulfate	ND		2.0	0.35	mg/L			05/24/14 11:49	1

Lab Sample ID: LCS 480-183860/123
 Matrix: Water
 Analysis Batch: 183860

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.64		mg/L		103	90 - 110
Sulfate	20.0	19.58		mg/L		98	90 - 110

Lab Sample ID: MB 480-184172/28
 Matrix: Water
 Analysis Batch: 184172

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/27/14 19:16	1
Sulfate	ND		2.0	0.35	mg/L			05/27/14 19:16	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-184172/27

Matrix: Water

Analysis Batch: 184172

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.01		mg/L		100	90 - 110
Sulfate	20.0	20.48		mg/L		102	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-184251/171

Matrix: Water

Analysis Batch: 184251

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/27/14 20:13	1

Lab Sample ID: LCS 480-184251/172

Matrix: Water

Analysis Batch: 184251

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.993		mg/L		99	90 - 110

Lab Sample ID: 480-60398-2 MS

Matrix: Water

Analysis Batch: 184251

Client Sample ID: MW-10-3-052214

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND		0.200	0.114	F1	mg/L		57	90 - 110

Lab Sample ID: 480-60398-2 DU

Matrix: Water

Analysis Batch: 184251

Client Sample ID: MW-10-3-052214

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	ND		ND		mg/L		NC	20

Lab Sample ID: MB 480-184467/36

Matrix: Water

Analysis Batch: 184467

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 17:04	1

Lab Sample ID: MB 480-184467/60

Matrix: Water

Analysis Batch: 184467

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 17:25	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-184467/37
 Matrix: Water
 Analysis Batch: 184467

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Lab Sample ID: LCS 480-184467/61
 Matrix: Water
 Analysis Batch: 184467

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-183702/27
 Matrix: Water
 Analysis Batch: 183702

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/23/14 00:00	1

Lab Sample ID: LCS 480-183702/28
 Matrix: Water
 Analysis Batch: 183702

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.53		mg/L		102	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-184775/3
 Matrix: Water
 Analysis Batch: 184775

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/28/14 16:10	1

Lab Sample ID: MB 480-184775/33
 Matrix: Water
 Analysis Batch: 184775

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/29/14 10:25	1

Lab Sample ID: LCS 480-184775/34
 Matrix: Water
 Analysis Batch: 184775

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	57.41		mg/L		96	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-184775/4

Matrix: Water

Analysis Batch: 184775

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	55.12		mg/L		92	90 - 110

Lab Sample ID: MB 480-185449/3

Matrix: Water

Analysis Batch: 185449

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/02/14 09:48	1

Lab Sample ID: LCS 480-185449/4

Matrix: Water

Analysis Batch: 185449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	65.15		mg/L		109	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-184000/30

Matrix: Water

Analysis Batch: 184000

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.14	J	5.0	0.79	mg/L			05/23/14 19:23	1

Lab Sample ID: MB 480-184000/6

Matrix: Water

Analysis Batch: 184000

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.20	J	5.0	0.79	mg/L			05/23/14 16:45	1

Lab Sample ID: LCS 480-184000/31

Matrix: Water

Analysis Batch: 184000

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.65		mg/L		96	90 - 110

Lab Sample ID: LCS 480-184000/7

Matrix: Water

Analysis Batch: 184000

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.34		mg/L		95	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-184215/27

Matrix: Water

Analysis Batch: 184215

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Lab Sample ID: MB 480-184215/3

Matrix: Water

Analysis Batch: 184215

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Lab Sample ID: LCS 480-184215/28

Matrix: Water

Analysis Batch: 184215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.676		mg/L		90	90 - 110

Lab Sample ID: LCS 480-184215/4

Matrix: Water

Analysis Batch: 184215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.756		mg/L		101	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

GC/MS VOA

Analysis Batch: 185012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	8260C	
480-60398-2	MW-10-3-052214	Total/NA	Water	8260C	
480-60398-3	MW-10-2-052214	Total/NA	Water	8260C	
LCS 480-185012/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185012/8	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 185288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-3 - DL	MW-10-2-052214	Total/NA	Water	8260C	
LCS 480-185288/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185288/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	RSK-175	
480-60398-2	MW-10-3-052214	Total/NA	Water	RSK-175	
480-60398-3	MW-10-2-052214	Total/NA	Water	RSK-175	
LCS 200-72919/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72919/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 183754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	RSK-175	
480-60398-2	MW-10-3-052214	Total/NA	Water	RSK-175	
480-60398-3	MW-10-2-052214	Total/NA	Water	RSK-175	
LCS 480-183754/26	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-183754/27	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-183754/25	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 183728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	3005A	
480-60398-2	MW-10-3-052214	Total/NA	Water	3005A	
480-60398-3	MW-10-2-052214	Total/NA	Water	3005A	
LCS 480-183728/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-183728/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 184070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	6010C	183728
480-60398-2	MW-10-3-052214	Total/NA	Water	6010C	183728
480-60398-3	MW-10-2-052214	Total/NA	Water	6010C	183728
LCS 480-183728/2-A	Lab Control Sample	Total/NA	Water	6010C	183728
MB 480-183728/1-A	Method Blank	Total/NA	Water	6010C	183728

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

General Chemistry

Analysis Batch: 183702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	353.2	
480-60398-2	MW-10-3-052214	Total/NA	Water	353.2	
480-60398-3	MW-10-2-052214	Total/NA	Water	353.2	
LCS 480-183702/28	Lab Control Sample	Total/NA	Water	353.2	
MB 480-183702/27	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 183706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	353.2	
480-60398-2	MW-10-3-052214	Total/NA	Water	353.2	
480-60398-3	MW-10-2-052214	Total/NA	Water	353.2	

Analysis Batch: 183860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-2	MW-10-3-052214	Total/NA	Water	300.0	
LCS 480-183860/123	Lab Control Sample	Total/NA	Water	300.0	
MB 480-183860/124	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 184000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	SM 2320B	
480-60398-2	MW-10-3-052214	Total/NA	Water	SM 2320B	
480-60398-3	MW-10-2-052214	Total/NA	Water	SM 2320B	
LCS 480-184000/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-184000/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-184000/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-184000/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 184172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	300.0	
480-60398-2	MW-10-3-052214	Total/NA	Water	300.0	
480-60398-3	MW-10-2-052214	Total/NA	Water	300.0	
LCS 480-184172/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-184172/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 184215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	SM 4500 S2 D	
480-60398-2	MW-10-3-052214	Total/NA	Water	SM 4500 S2 D	
480-60398-3	MW-10-2-052214	Total/NA	Water	SM 4500 S2 D	
LCS 480-184215/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCS 480-184215/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-184215/27	Method Blank	Total/NA	Water	SM 4500 S2 D	
MB 480-184215/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 184251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	350.1	
480-60398-2	MW-10-3-052214	Total/NA	Water	350.1	
480-60398-2 DU	MW-10-3-052214	Total/NA	Water	350.1	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

General Chemistry (Continued)

Analysis Batch: 184251 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-2 MS	MW-10-3-052214	Total/NA	Water	350.1	
LCS 480-184251/172	Lab Control Sample	Total/NA	Water	350.1	
MB 480-184251/171	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 184467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-3	MW-10-2-052214	Total/NA	Water	350.1	
LCS 480-184467/37	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184467/61	Lab Control Sample	Total/NA	Water	350.1	
MB 480-184467/36	Method Blank	Total/NA	Water	350.1	
MB 480-184467/60	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 184775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-1	MW-9-101A-052214	Total/NA	Water	9060A	
480-60398-3	MW-10-2-052214	Total/NA	Water	9060A	
LCS 480-184775/34	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-184775/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-184775/3	Method Blank	Total/NA	Water	9060A	
MB 480-184775/33	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 185449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60398-2	MW-10-3-052214	Total/NA	Water	9060A	
LCS 480-185449/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-185449/3	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Client Sample ID: MW-9-101A-052214

Lab Sample ID: 480-60398-1

Date Collected: 05/22/14 09:35

Matrix: Water

Date Received: 05/22/14 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	185012	05/31/14 14:38	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 11:52	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	183754	05/23/14 15:58	JRL	TAL BUF
Total/NA	Prep	3005A			183728	05/23/14 10:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184070	05/23/14 21:42	JRK	TAL BUF
Total/NA	Analysis	300.0		20	184172	05/27/14 21:08	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184251	05/27/14 20:31	RS	TAL BUF
Total/NA	Analysis	353.2		1	183702	05/23/14 00:16	KS	TAL BUF
Total/NA	Analysis	353.2		1	183706	05/23/14 00:16	KS	TAL BUF
Total/NA	Analysis	9060A		1	184775	05/29/14 11:20	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184000	05/23/14 19:44	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	184215	05/27/14 12:00	EGS	TAL BUF

Client Sample ID: MW-10-3-052214

Lab Sample ID: 480-60398-2

Date Collected: 05/22/14 12:35

Matrix: Water

Date Received: 05/22/14 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	185012	05/31/14 15:02	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 12:00	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	183754	05/23/14 16:29	JRL	TAL BUF
Total/NA	Prep	3005A			183728	05/23/14 10:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184070	05/23/14 21:45	JRK	TAL BUF
Total/NA	Analysis	300.0		1	183860	05/24/14 12:39	KRC	TAL BUF
Total/NA	Analysis	300.0		5	184172	05/27/14 21:18	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184251	05/27/14 20:32	RS	TAL BUF
Total/NA	Analysis	353.2		1	183702	05/23/14 00:18	KS	TAL BUF
Total/NA	Analysis	353.2		1	183706	05/23/14 00:18	KS	TAL BUF
Total/NA	Analysis	9060A		1	185449	06/02/14 16:13	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184000	05/23/14 19:50	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	184215	05/27/14 12:00	EGS	TAL BUF

Client Sample ID: MW-10-2-052214

Lab Sample ID: 480-60398-3

Date Collected: 05/22/14 15:20

Matrix: Water

Date Received: 05/22/14 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	185012	05/31/14 15:26	GTG	TAL BUF
Total/NA	Analysis	8260C	DL	20	185288	06/03/14 02:16	RAS	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 12:07	NEA	TAL BUR

TestAmerica Buffalo

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Client Sample ID: MW-10-2-052214

Lab Sample ID: 480-60398-3

Date Collected: 05/22/14 15:20

Matrix: Water

Date Received: 05/22/14 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	183754	05/23/14 16:47	JRL	TAL BUF
Total/NA	Prep	3005A			183728	05/23/14 10:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184070	05/23/14 21:47	JRK	TAL BUF
Total/NA	Analysis	300.0		20	184172	05/27/14 21:28	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184467	05/28/14 17:31	RS	TAL BUF
Total/NA	Analysis	353.2		1	183702	05/23/14 00:19	KS	TAL BUF
Total/NA	Analysis	353.2		1	183706	05/23/14 00:19	KS	TAL BUF
Total/NA	Analysis	9060A		1	184775	05/29/14 12:16	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184000	05/23/14 19:56	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	184215	05/27/14 12:00	EGS	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60398-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60398-1	MW-9-101A-052214	Water	05/22/14 09:35	05/22/14 16:20
480-60398-2	MW-10-3-052214	Water	05/22/14 12:35	05/22/14 16:20
480-60398-3	MW-10-2-052214	Water	05/22/14 15:20	05/22/14 16:20

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TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2298
 Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record



Client Information
 Client Contact: Mr. Tom Bohlen
 Company: GZA GeoEnvironmental, Inc.
 Address: 535 Washington Street 11th Floor
 City: Buffalo
 State, Zip: NY, 14203
 Phone: 4062165
 Email: thomas.bohlen@gza.com
 Project Name: 058507, GM-Loopport Groundwater Sampling
 Site: S50W#:
 Lab PM: Deyo, Melissa L.
 Photo: T. Bohlen
 E-Mail: melissa.deyo@testamericainc.com
 Carri: 480-60398 Chain of Custody
 Page 4 of 4
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Analysis Requested	Preservation Codes	Special Instructions/Note
MW-9-101A-052214	5/22/14	935	G	Water	RSK_175_CO2 - Carbon dioxide	A - HCL	
MW-10-3-052214	↓	1035	↓	Water	RSK_175 - Methane, Ethane, Ethene	B - NaOH	
MW-10-2-052214	↓	1500	↓	Water	9060 - Total Organic Carbon	C - Zn Acetate	
				Water	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chloride	D - Nitric Acid	
				Water	6010B - Metals - Fe, Mn, Mg	E - NaHSO4	
				Water	350.1 - Ammonia	F - MeOH	
				Water	333.2, 353.2, Nitrite, Nitrate, Calc	G - Amchlor	
				Water	SM4500_S2_D - Sulfide	H - Ascorbic Acid	
				Water	2320B - Total Alkalinity	I - Ice	
				Water	300.0_28D - Anions (Chloride & Sulfate)	J - DI Water	
						K - EDTA	
						L - EDA	
						Other:	

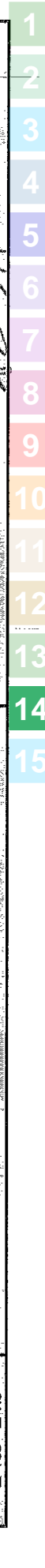
Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Thomas Bohlen Date/Time: 5/22/14 1620 Company: GZA
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 A Yes Δ No



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60398-1

Login Number: 60398

List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60398-1

Login Number: 60398

List Source: TestAmerica Burlington

List Number: 2

List Creation: 05/23/14 02:20 PM

Creator: Lavigne, Scott M

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877514,515,516
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2C°,2.2C°,3.0C°/IR GUN ID 181.CF=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60503-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/3/2014 4:10:07 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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results through

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Qualifiers

GC VOA

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.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

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.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Job ID: 480-60503-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60503-1

Receipt

The samples were received on 5/23/2014 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: (480-60503-2 MS), (480-60503-2 MSD), MW-7-4-052314 (480-60503-2). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

Method(s) 6010C: The method blank for batch 480-184063 contained total iron above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples MW-7-2-052314 (480-60503-1), MW-7-4-052314 (480-60503-2) was not performed.

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

General Chemistry

Method(s) SM 2320B: The method blank for batch 184244 contained alkalinity above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. MW-7-2-052314 (480-60503-1), MW-7-4-052314 (480-60503-2)

Method(s) 353.2: The method blanks for batch 183945 contained nitrate-nitrite concentrations above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. MW-7-2-052314 (480-60503-1), MW-7-4-052314 (480-60503-2)

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Client Sample ID: MW-7-2-052314

Lab Sample ID: 480-60503-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	1.6	J	4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.076	B	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	29.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.023		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	80.3		0.50	0.28	mg/L	1		300.0	Total/NA
Sulfate	18.9		2.0	0.35	mg/L	1		300.0	Total/NA
Nitrate	0.055		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.034	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.1		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	356	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	9100		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-4-052314

Lab Sample ID: 480-60503-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.28	B	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	31.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.012		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	175		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	37.8		10.0	1.7	mg/L	5		300.0	Total/NA
Nitrate	0.27		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.036	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.59	J	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	372	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	7000		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Client Sample ID: MW-7-2-052314

Lab Sample ID: 480-60503-1

Date Collected: 05/23/14 15:05

Matrix: Water

Date Received: 05/23/14 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/30/14 13:40	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/14 13:40	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/14 13:40	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/14 13:40	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/14 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		05/30/14 13:40	1
4-Bromofluorobenzene (Surr)	98		73 - 120		05/30/14 13:40	1
Toluene-d8 (Surr)	98		71 - 126		05/30/14 13:40	1
Dibromofluoromethane (Surr)	103		60 - 140		05/30/14 13:40	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/27/14 13:13	1
Ethene	ND		7.0	1.5	ug/L			05/27/14 13:13	1
Methane	1.6	J	4.0	1.0	ug/L			05/27/14 13:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	9100		1000	1000	ug/L			06/02/14 15:19	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.076	B	0.050	0.019	mg/L		05/27/14 09:25	05/27/14 18:48	1
Magnesium	29.7		0.20	0.043	mg/L		05/27/14 09:25	05/27/14 18:48	1
Manganese	0.023		0.0030	0.00040	mg/L		05/27/14 09:25	05/27/14 18:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.3		0.50	0.28	mg/L			05/28/14 07:46	1
Sulfate	18.9		2.0	0.35	mg/L			05/28/14 17:20	1
Ammonia	ND		0.020	0.0090	mg/L			05/30/14 14:23	1
Nitrate	0.055		0.050	0.020	mg/L			05/24/14 00:02	1
Nitrite	0.034	J	0.050	0.020	mg/L			05/24/14 00:02	1
Total Organic Carbon	1.1		1.0	0.43	mg/L			05/29/14 07:40	1
Total Alkalinity	356	B	5.0	0.79	mg/L			05/27/14 16:33	1
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Client Sample ID: MW-7-4-052314

Lab Sample ID: 480-60503-2

Date Collected: 05/23/14 15:45

Matrix: Water

Date Received: 05/23/14 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/30/14 00:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/14 00:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/14 00:25	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/14 00:25	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/14 00:25	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Client Sample ID: MW-7-4-052314

Lab Sample ID: 480-60503-2

Date Collected: 05/23/14 15:45

Matrix: Water

Date Received: 05/23/14 16:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		05/30/14 00:25	1
4-Bromofluorobenzene (Surr)	99		73 - 120		05/30/14 00:25	1
Toluene-d8 (Surr)	100		71 - 126		05/30/14 00:25	1
Dibromofluoromethane (Surr)	103		60 - 140		05/30/14 00:25	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/27/14 13:30	1
Ethene	ND		7.0	1.5	ug/L			05/27/14 13:30	1
Methane	ND		4.0	1.0	ug/L			05/27/14 13:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	7000		1000	1000	ug/L			06/02/14 15:26	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.28	B	0.050	0.019	mg/L		05/27/14 09:25	05/27/14 18:51	1
Magnesium	31.7		0.20	0.043	mg/L		05/27/14 09:25	05/27/14 18:51	1
Manganese	0.012		0.0030	0.00040	mg/L		05/27/14 09:25	05/27/14 18:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	175		2.5	1.4	mg/L			05/28/14 17:30	5
Sulfate	37.8		10.0	1.7	mg/L			05/28/14 17:30	5
Ammonia	ND		0.020	0.0090	mg/L			05/30/14 14:24	1
Nitrate	0.27		0.050	0.020	mg/L			05/24/14 00:03	1
Nitrite	0.036	J	0.050	0.020	mg/L			05/24/14 00:03	1
Total Organic Carbon	0.59	J	1.0	0.43	mg/L			05/29/14 08:09	1
Total Alkalinity	372	B	5.0	0.79	mg/L			05/27/14 16:40	1
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60503-1	MW-7-2-052314	104	98	98	103
480-60503-2	MW-7-4-052314	104	99	100	103
LCS 480-184719/5	Lab Control Sample	102	100	98	103
LCS 480-184846/5	Lab Control Sample	101	101	99	103
LCSD 480-184719/25	Lab Control Sample Dup	102	98	98	102
LCSD 480-184846/6	Lab Control Sample Dup	100	100	97	103
MB 480-184719/6	Method Blank	100	98	97	102
MB 480-184846/7	Method Blank	103	101	99	103

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-184719/6

Matrix: Water

Analysis Batch: 184719

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/29/14 23:14	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/14 23:14	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/14 23:14	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/14 23:14	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/14 23:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		66 - 137		05/29/14 23:14	1
4-Bromofluorobenzene (Surr)	98		73 - 120		05/29/14 23:14	1
Toluene-d8 (Surr)	97		71 - 126		05/29/14 23:14	1
Dibromofluoromethane (Surr)	102		60 - 140		05/29/14 23:14	1

Lab Sample ID: LCS 480-184719/5

Matrix: Water

Analysis Batch: 184719

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.4		ug/L		102	74 - 124
Tetrachloroethene	25.0	23.3		ug/L		93	74 - 122
trans-1,2-Dichloroethene	25.0	25.4		ug/L		102	73 - 127
Trichloroethene	25.0	25.2		ug/L		101	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	98		71 - 126
Dibromofluoromethane (Surr)	103		60 - 140

Lab Sample ID: LCSD 480-184719/25

Matrix: Water

Analysis Batch: 184719

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	74 - 124	4	15
Tetrachloroethene	25.0	21.8		ug/L		87	74 - 122	7	20
trans-1,2-Dichloroethene	25.0	24.1		ug/L		96	73 - 127	6	20
Trichloroethene	25.0	23.9		ug/L		96	74 - 123	5	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	98		71 - 126
Dibromofluoromethane (Surr)	102		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-184846/7

Matrix: Water

Analysis Batch: 184846

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/30/14 12:57	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/14 12:57	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/14 12:57	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/14 12:57	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/14 12:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		66 - 137		05/30/14 12:57	1
4-Bromofluorobenzene (Surr)	101		73 - 120		05/30/14 12:57	1
Toluene-d8 (Surr)	99		71 - 126		05/30/14 12:57	1
Dibromofluoromethane (Surr)	103		60 - 140		05/30/14 12:57	1

Lab Sample ID: LCS 480-184846/5

Matrix: Water

Analysis Batch: 184846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	26.1		ug/L		104	74 - 124
Tetrachloroethene	25.0	24.4		ug/L		98	74 - 122
trans-1,2-Dichloroethene	25.0	26.3		ug/L		105	73 - 127
Trichloroethene	25.0	26.1		ug/L		104	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
4-Bromofluorobenzene (Surr)	101		73 - 120
Toluene-d8 (Surr)	99		71 - 126
Dibromofluoromethane (Surr)	103		60 - 140

Lab Sample ID: LCSD 480-184846/6

Matrix: Water

Analysis Batch: 184846

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	74 - 124	4	15
Tetrachloroethene	25.0	23.1		ug/L		92	74 - 122	5	20
trans-1,2-Dichloroethene	25.0	25.3		ug/L		101	73 - 127	4	20
Trichloroethene	25.0	25.2		ug/L		101	74 - 123	3	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	97		71 - 126
Dibromofluoromethane (Surr)	103		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-184085/3
Matrix: Water
Analysis Batch: 184085

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/27/14 08:25	1
Ethene	ND		7.0	1.5	ug/L			05/27/14 08:25	1
Methane	ND		4.0	1.0	ug/L			05/27/14 08:25	1

Lab Sample ID: LCS 480-184085/4
Matrix: Water
Analysis Batch: 184085

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	16.0		ug/L		110	52 - 138
Ethene	13.5	14.5		ug/L		108	50 - 137
Methane	7.69	8.66		ug/L		113	48 - 174

Lab Sample ID: LCSD 480-184085/5
Matrix: Water
Analysis Batch: 184085

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	16.0		ug/L		110	52 - 138	0	50
Ethene	13.5	14.5		ug/L		107	50 - 137	0	50
Methane	7.69	8.73		ug/L		113	48 - 174	1	50

Lab Sample ID: MB 200-72919/3
Matrix: Water
Analysis Batch: 72919

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/02/14 11:14	1

Lab Sample ID: LCS 200-72919/2
Matrix: Water
Analysis Batch: 72919

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5340		ug/L		107	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-184063/1-A
Matrix: Water
Analysis Batch: 184294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 184063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0291	J	0.050	0.019	mg/L		05/27/14 09:25	05/27/14 17:36	1
Magnesium	ND		0.20	0.043	mg/L		05/27/14 09:25	05/27/14 17:36	1
Manganese	ND		0.0030	0.00040	mg/L		05/27/14 09:25	05/27/14 17:36	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-184063/2-A

Matrix: Water

Analysis Batch: 184294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 184063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.96		mg/L		100	80 - 120
Magnesium	10.0	10.78		mg/L		108	80 - 120
Manganese	0.200	0.211		mg/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-184177/100

Matrix: Water

Analysis Batch: 184177

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/28/14 07:26	1
Sulfate	ND	^	2.0	0.35	mg/L			05/28/14 07:26	1

Lab Sample ID: LCS 480-184177/99

Matrix: Water

Analysis Batch: 184177

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.56		mg/L		98	90 - 110
Sulfate	20.0	20.61	^	mg/L		103	90 - 110

Lab Sample ID: MB 480-184371/4

Matrix: Water

Analysis Batch: 184371

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/28/14 14:28	1
Sulfate	ND		2.0	0.35	mg/L			05/28/14 14:28	1

Lab Sample ID: LCS 480-184371/3

Matrix: Water

Analysis Batch: 184371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.37		mg/L		102	90 - 110
Sulfate	20.0	19.71		mg/L		99	90 - 110

Lab Sample ID: 480-60503-2 MS

Matrix: Water

Analysis Batch: 184371

Client Sample ID: MW-7-4-052314

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	175		125	308.5		mg/L		107	90 - 110
Sulfate	37.8		125	174.3		mg/L		109	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 480-60503-2 MSD

Matrix: Water

Analysis Batch: 184371

Client Sample ID: MW-7-4-052314

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	175		125	307.0		mg/L		106	90 - 110	1	20
Sulfate	37.8		125	174.2		mg/L		109	90 - 110	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-184978/27

Matrix: Water

Analysis Batch: 184978

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/30/14 14:19	1

Lab Sample ID: MB 480-184978/3

Matrix: Water

Analysis Batch: 184978

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/30/14 13:59	1

Lab Sample ID: LCS 480-184978/28

Matrix: Water

Analysis Batch: 184978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: LCS 480-184978/4

Matrix: Water

Analysis Batch: 184978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-183946/3

Matrix: Water

Analysis Batch: 183946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	0.0375	J	0.050	0.020	mg/L			05/23/14 23:25	1

Lab Sample ID: MB 480-183946/32

Matrix: Water

Analysis Batch: 183946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/23/14 23:57	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: LCS 480-183946/33
 Matrix: Water
 Analysis Batch: 183946

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.59		mg/L		106	90 - 110

Lab Sample ID: LCS 480-183946/4
 Matrix: Water
 Analysis Batch: 183946

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.61		mg/L		107	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-184910/16
 Matrix: Water
 Analysis Batch: 184910

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/29/14 01:38	1

Lab Sample ID: LCS 480-184910/17
 Matrix: Water
 Analysis Batch: 184910

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	59.34		mg/L		99	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-184244/30
 Matrix: Water
 Analysis Batch: 184244

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.32	J	5.0	0.79	mg/L			05/27/14 15:08	1

Lab Sample ID: MB 480-184244/6
 Matrix: Water
 Analysis Batch: 184244

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.29	J	5.0	0.79	mg/L			05/27/14 12:11	1

Lab Sample ID: LCS 480-184244/31
 Matrix: Water
 Analysis Batch: 184244

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.21		mg/L		95	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-184244/7

Matrix: Water

Analysis Batch: 184244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.27		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-184215/27

Matrix: Water

Analysis Batch: 184215

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/27/14 12:00	1

Lab Sample ID: LCS 480-184215/28

Matrix: Water

Analysis Batch: 184215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.676		mg/L		90	90 - 110

Lab Sample ID: 480-60503-1 MS

Matrix: Water

Analysis Batch: 184215

Client Sample ID: MW-7-2-052314

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.502		mg/L		100	90 - 110

Lab Sample ID: 480-60503-1 MSD

Matrix: Water

Analysis Batch: 184215

Client Sample ID: MW-7-2-052314

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfide	ND		0.500	0.517		mg/L		103	90 - 110	3	20

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

GC/MS VOA

Analysis Batch: 184719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-2	MW-7-4-052314	Total/NA	Water	8260C	
LCS 480-184719/5	Lab Control Sample	Total/NA	Water	8260C	
LCS 480-184719/25	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-184719/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 184846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	8260C	
LCS 480-184846/5	Lab Control Sample	Total/NA	Water	8260C	
LCS 480-184846/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-184846/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	RSK-175	
480-60503-2	MW-7-4-052314	Total/NA	Water	RSK-175	
LCS 200-72919/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72919/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 184085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	RSK-175	
480-60503-2	MW-7-4-052314	Total/NA	Water	RSK-175	
LCS 480-184085/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-184085/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-184085/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 184063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	3005A	
480-60503-2	MW-7-4-052314	Total/NA	Water	3005A	
LCS 480-184063/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-184063/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 184294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	6010C	184063
480-60503-2	MW-7-4-052314	Total/NA	Water	6010C	184063
LCS 480-184063/2-A	Lab Control Sample	Total/NA	Water	6010C	184063
MB 480-184063/1-A	Method Blank	Total/NA	Water	6010C	184063

General Chemistry

Analysis Batch: 183946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

General Chemistry (Continued)

Analysis Batch: 183946 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-2	MW-7-4-052314	Total/NA	Water	353.2	
LCS 480-183946/33	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-183946/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-183946/3	Method Blank	Total/NA	Water	353.2	
MB 480-183946/32	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 183947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	353.2	
480-60503-2	MW-7-4-052314	Total/NA	Water	353.2	

Analysis Batch: 184177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	300.0	
LCS 480-184177/99	Lab Control Sample	Total/NA	Water	300.0	
MB 480-184177/100	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 184215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	SM 4500 S2 D	
480-60503-1 MS	MW-7-2-052314	Total/NA	Water	SM 4500 S2 D	
480-60503-1 MSD	MW-7-2-052314	Total/NA	Water	SM 4500 S2 D	
480-60503-2	MW-7-4-052314	Total/NA	Water	SM 4500 S2 D	
LCS 480-184215/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-184215/27	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 184244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	SM 2320B	
480-60503-2	MW-7-4-052314	Total/NA	Water	SM 2320B	
LCS 480-184244/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-184244/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-184244/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-184244/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 184371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	300.0	
480-60503-2	MW-7-4-052314	Total/NA	Water	300.0	
480-60503-2 MS	MW-7-4-052314	Total/NA	Water	300.0	
480-60503-2 MSD	MW-7-4-052314	Total/NA	Water	300.0	
LCS 480-184371/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-184371/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 184910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	9060A	
480-60503-2	MW-7-4-052314	Total/NA	Water	9060A	
LCS 480-184910/17	Lab Control Sample	Total/NA	Water	9060A	
MB 480-184910/16	Method Blank	Total/NA	Water	9060A	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

General Chemistry (Continued)

Analysis Batch: 184978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60503-1	MW-7-2-052314	Total/NA	Water	350.1	
480-60503-2	MW-7-4-052314	Total/NA	Water	350.1	
LCS 480-184978/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184978/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-184978/27	Method Blank	Total/NA	Water	350.1	
MB 480-184978/3	Method Blank	Total/NA	Water	350.1	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Client Sample ID: MW-7-2-052314

Lab Sample ID: 480-60503-1

Date Collected: 05/23/14 15:05

Matrix: Water

Date Received: 05/23/14 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	184846	05/30/14 13:40	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 15:19	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184085	05/27/14 13:13	DLE	TAL BUF
Total/NA	Prep	3005A			184063	05/27/14 09:25	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184294	05/27/14 18:48	MTM2	TAL BUF
Total/NA	Analysis	300.0		1	184371	05/28/14 17:20	KRC	TAL BUF
Total/NA	Analysis	300.0		1	184177	05/28/14 07:46	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184978	05/30/14 14:23	RS	TAL BUF
Total/NA	Analysis	353.2		1	183946	05/24/14 00:02	KS	TAL BUF
Total/NA	Analysis	353.2		1	183947	05/24/14 00:02	KS	TAL BUF
Total/NA	Analysis	9060A		1	184910	05/29/14 07:40	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184244	05/27/14 16:33	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	184215	05/27/14 12:00	EGS	TAL BUF

Client Sample ID: MW-7-4-052314

Lab Sample ID: 480-60503-2

Date Collected: 05/23/14 15:45

Matrix: Water

Date Received: 05/23/14 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	184719	05/30/14 00:25	PJQ	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 15:26	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184085	05/27/14 13:30	DLE	TAL BUF
Total/NA	Prep	3005A			184063	05/27/14 09:25	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184294	05/27/14 18:51	MTM2	TAL BUF
Total/NA	Analysis	300.0		5	184371	05/28/14 17:30	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184978	05/30/14 14:24	RS	TAL BUF
Total/NA	Analysis	353.2		1	183946	05/24/14 00:03	KS	TAL BUF
Total/NA	Analysis	353.2		1	183947	05/24/14 00:03	KS	TAL BUF
Total/NA	Analysis	9060A		1	184910	05/29/14 08:09	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184244	05/27/14 16:40	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	184215	05/27/14 12:00	EGS	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

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

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60503-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60503-1	MW-7-2-052314	Water	05/23/14 15:05	05/23/14 16:45
480-60503-2	MW-7-4-052314	Water	05/23/14 15:45	05/23/14 16:45

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Chain of Custody Record

Client Information
 Client Contact: Mr. Tom Bohlen
 Company: GZA GeoEnvironmental, Inc.
 Address: 535 Washington Street 11th Floor
 City: Buffalo
 State, Zip: NY, 14203
 Phone: 4062165
 Email: thomas.bohlen@gza.com
 Project Name: 058507, GM-Loopport Groundwater Sampling
 Site:

Sampler: T. Bohlen
 Lab PVI: Deyo, Melissa L.
 Phone: 716-695-2300
 E-Mail: melissa.deyo@testamericainc.com

Carrier Tracking No(s): 480-49375-13138.4
 Page: Page 4 of 4
 Job #:

Analysis Requested

Analysis Requested	Field Filtered Sample (Yes or No)	Form MS/SP (Yes or No)	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chloride	9080 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2 Nitrite, Nitrate Calc	2220B - Total Alkalinity	300.0, 20B - Anions (Chloride & Sulfate)	Total Number of Containers
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				
			MM	XX	XX	XX	XX	XX				

Matrix (Water, Soil, Other)
 Sample Type (C=comp, G=grab)
 Sample Time
 Sample Date
 Preservation Code

Sample Identification
 MW-7-2-052314
 MW-7-4-052314
 ↓
 1503/14 1505 G
 1515 G
 Water
 Water
 Water
 Water
 Water
 Water

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/Note:
 480-60503 Chain of Custody

Special Instructions/Note:
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Method of Shipment
 Received by: [Signature]
 Date/Time: 5/23/14 1645
 Company: TAA
 Received by: [Signature]
 Date/Time: _____
 Company: _____
 Received by: _____
 Date/Time: _____
 Company: _____

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: [Signature] Date/Time: 5/23/14 1645 Company: BZA
 Relinquished by: [Signature] Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal No.: _____
 A Yes, Δ No
 Cooler Temperature(s) °C and Other Remarks: 512#



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60503-1

Login Number: 60503

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60503-1

Login Number: 60503

List Number: 2

Creator: Gagne, Eric M

List Source: TestAmerica Burlington

List Creation: 05/28/14 03:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877530 & 540
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6°C & 4.8°C. IR GUN ID 181. CF = 0
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	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	No SAMPLE TIMES ON CONTAINER LABELS.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60591-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/11/2014 1:08:19 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

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.
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Job ID: 480-60591-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60591-1

Receipt

The samples were received on 5/27/2014 4:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

Except:

The sample time listed on the COC for sample MW-7-5 is listed as 16:45 on 5/27/2014 which is after the relinquished time.

GC/MS VOA

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: GW-Duplicate (480-60591-3), MW-7-5-052714 (480-60591-2). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: GW-Duplicate (480-60591-3), MW-7-1-052714 (480-60591-1), MW-7-5-052714 (480-60591-2). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

Method(s) 6010C: The continuing calibration blank (CCB) for analytical batch 480-185085 contained iron above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: MW-7-1-052714

Lab Sample ID: 480-60591-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Methane	25		4.0	1.0	ug/L	1			RSK-175	Total/NA
Iron	0.42		0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	105		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	0.35		0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	1410		10.0	5.6	mg/L	20			300.0	Total/NA
Sulfate	98.6		40.0	7.0	mg/L	20			300.0	Total/NA
Ammonia	0.039		0.020	0.0090	mg/L	1			350.1	Total/NA
Total Organic Carbon	1.2		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	333		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	15000		1000	1000	ug/L	1			RSK-175	Total/NA

Client Sample ID: MW-7-5-052714

Lab Sample ID: 480-60591-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	440		100	81	ug/L	100			8260C	Total/NA
Tetrachloroethene	5200		100	36	ug/L	100			8260C	Total/NA
Trichloroethene	580		100	46	ug/L	100			8260C	Total/NA
Methane	9.0		4.0	1.0	ug/L	1			RSK-175	Total/NA
Iron	0.47		0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	146		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	1.1		0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	3970		25.0	14.1	mg/L	50			300.0	Total/NA
Sulfate	228		100	17.5	mg/L	50			300.0	Total/NA
Ammonia	0.012	J	0.020	0.0090	mg/L	1			350.1	Total/NA
Nitrate	1.8		0.050	0.020	mg/L	1			353.2	Total/NA
Nitrite	0.051		0.050	0.020	mg/L	1			353.2	Total/NA
Total Organic Carbon	3.2		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	354		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	23000		1000	1000	ug/L	1			RSK-175	Total/NA

Client Sample ID: GW-Duplicate

Lab Sample ID: 480-60591-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	430		100	81	ug/L	100			8260C	Total/NA
Tetrachloroethene	4700		100	36	ug/L	100			8260C	Total/NA
Trichloroethene	540		100	46	ug/L	100			8260C	Total/NA
Methane	7.7		4.0	1.0	ug/L	1			RSK-175	Total/NA
Iron	0.51		0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	150		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	1.1		0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	3980		25.0	14.1	mg/L	50			300.0	Total/NA
Sulfate	236		100	17.5	mg/L	50			300.0	Total/NA
Ammonia	0.012	J	0.020	0.0090	mg/L	1			350.1	Total/NA
Nitrate	1.8		0.050	0.020	mg/L	1			353.2	Total/NA
Nitrite	0.051		0.050	0.020	mg/L	1			353.2	Total/NA
Total Organic Carbon	3.4		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	356		5.0	0.79	mg/L	1			SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: GW-Duplicate (Continued)

Lab Sample ID: 480-60591-3

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	22000		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

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Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: MW-7-1-052714

Lab Sample ID: 480-60591-1

Date Collected: 05/27/14 13:20

Matrix: Water

Date Received: 05/27/14 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/02/14 23:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/02/14 23:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/02/14 23:52	1
Trichloroethene	ND		1.0	0.46	ug/L			06/02/14 23:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/02/14 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	125		66 - 137		06/02/14 23:52	1
4-Bromofluorobenzene (Surr)	96		73 - 120		06/02/14 23:52	1
Toluene-d8 (Surr)	92		71 - 126		06/02/14 23:52	1
Dibromofluoromethane (Surr)	114		60 - 140		06/02/14 23:52	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/28/14 09:37	1
Ethene	ND		7.0	1.5	ug/L			05/28/14 09:37	1
Methane	25		4.0	1.0	ug/L			05/28/14 09:37	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	15000		1000	1000	ug/L			06/02/14 15:47	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.42		0.050	0.019	mg/L		05/29/14 09:00	06/02/14 14:06	1
Magnesium	105		0.20	0.043	mg/L		05/29/14 09:00	06/02/14 14:06	1
Manganese	0.35		0.0030	0.00040	mg/L		05/29/14 09:00	06/02/14 14:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1410		10.0	5.6	mg/L			05/30/14 22:58	20
Sulfate	98.6		40.0	7.0	mg/L			05/30/14 22:58	20
Ammonia	0.039		0.020	0.0090	mg/L			05/28/14 21:27	1
Nitrate	ND		0.050	0.020	mg/L			05/28/14 16:17	1
Nitrite	ND		0.050	0.020	mg/L			05/28/14 16:17	1
Total Organic Carbon	1.2		1.0	0.43	mg/L			05/30/14 07:45	1
Total Alkalinity	333		5.0	0.79	mg/L			05/29/14 11:19	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 11:53	1

Client Sample ID: MW-7-5-052714

Lab Sample ID: 480-60591-2

Date Collected: 05/27/14 16:45

Matrix: Water

Date Received: 05/27/14 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	440		100	81	ug/L			06/04/14 02:37	100
Tetrachloroethene	5200		100	36	ug/L			06/04/14 02:37	100
trans-1,2-Dichloroethene	ND		100	90	ug/L			06/04/14 02:37	100
Trichloroethene	580		100	46	ug/L			06/04/14 02:37	100
Vinyl chloride	ND		100	90	ug/L			06/04/14 02:37	100

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: MW-7-5-052714

Lab Sample ID: 480-60591-2

Date Collected: 05/27/14 16:45

Matrix: Water

Date Received: 05/27/14 16:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		66 - 137		06/04/14 02:37	100
4-Bromofluorobenzene (Surr)	101		73 - 120		06/04/14 02:37	100
Toluene-d8 (Surr)	95		71 - 126		06/04/14 02:37	100
Dibromofluoromethane (Surr)	99		60 - 140		06/04/14 02:37	100

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/28/14 09:54	1
Ethene	ND		7.0	1.5	ug/L			05/28/14 09:54	1
Methane	9.0		4.0	1.0	ug/L			05/28/14 09:54	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	23000		1000	1000	ug/L			06/02/14 15:54	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.47		0.050	0.019	mg/L		05/29/14 09:00	06/02/14 14:20	1
Magnesium	146		0.20	0.043	mg/L		05/29/14 09:00	06/02/14 14:20	1
Manganese	1.1		0.0030	0.00040	mg/L		05/29/14 09:00	06/02/14 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3970		25.0	14.1	mg/L			05/30/14 23:08	50
Sulfate	228		100	17.5	mg/L			05/30/14 23:08	50
Ammonia	0.012	J	0.020	0.0090	mg/L			05/28/14 21:28	1
Nitrate	1.8		0.050	0.020	mg/L			05/28/14 19:10	1
Nitrite	0.051		0.050	0.020	mg/L			05/28/14 19:10	1
Total Organic Carbon	3.2		1.0	0.43	mg/L			05/30/14 08:50	1
Total Alkalinity	354		5.0	0.79	mg/L			05/29/14 11:25	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 11:56	1

Client Sample ID: GW-Duplicate

Lab Sample ID: 480-60591-3

Date Collected: 05/27/14 00:00

Matrix: Water

Date Received: 05/27/14 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	430		100	81	ug/L			06/04/14 03:00	100
Tetrachloroethene	4700		100	36	ug/L			06/04/14 03:00	100
trans-1,2-Dichloroethene	ND		100	90	ug/L			06/04/14 03:00	100
Trichloroethene	540		100	46	ug/L			06/04/14 03:00	100
Vinyl chloride	ND		100	90	ug/L			06/04/14 03:00	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		66 - 137		06/04/14 03:00	100
4-Bromofluorobenzene (Surr)	97		73 - 120		06/04/14 03:00	100
Toluene-d8 (Surr)	93		71 - 126		06/04/14 03:00	100
Dibromofluoromethane (Surr)	107		60 - 140		06/04/14 03:00	100

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/28/14 10:20	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: GW-Duplicate

Lab Sample ID: 480-60591-3

Date Collected: 05/27/14 00:00

Matrix: Water

Date Received: 05/27/14 16:40

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethene	ND		7.0	1.5	ug/L			05/28/14 10:20	1
Methane	7.7		4.0	1.0	ug/L			05/28/14 10:20	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	2200		1000	1000	ug/L			06/02/14 16:03	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.51		0.050	0.019	mg/L		05/29/14 09:00	06/02/14 14:32	1
Magnesium	150		0.20	0.043	mg/L		05/29/14 09:00	06/02/14 14:32	1
Manganese	1.1		0.0030	0.00040	mg/L		05/29/14 09:00	06/02/14 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3980		25.0	14.1	mg/L			05/30/14 23:18	50
Sulfate	236		100	17.5	mg/L			05/30/14 23:18	50
Ammonia	0.012	J	0.020	0.0090	mg/L			05/28/14 21:29	1
Nitrate	1.8		0.050	0.020	mg/L			05/28/14 19:11	1
Nitrite	0.051		0.050	0.020	mg/L			05/28/14 19:11	1
Total Organic Carbon	3.4		1.0	0.43	mg/L			06/01/14 16:46	1
Total Alkalinity	356		5.0	0.79	mg/L			05/29/14 11:45	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 11:59	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60591-1	MW-7-1-052714	125	96	92	114
480-60591-2	MW-7-5-052714	110	101	95	99
480-60591-3	GW-Duplicate	112	97	93	107
LCS 480-185270/6	Lab Control Sample	119	103	94	112
LCS 480-185495/6	Lab Control Sample	107	101	96	106
MB 480-185270/8	Method Blank	120	99	93	111
MB 480-185495/8	Method Blank	111	98	96	102

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-185270/8

Matrix: Water

Analysis Batch: 185270

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/02/14 23:14	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/02/14 23:14	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/02/14 23:14	1
Trichloroethene	ND		1.0	0.46	ug/L			06/02/14 23:14	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/02/14 23:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		66 - 137		06/02/14 23:14	1
4-Bromofluorobenzene (Surr)	99		73 - 120		06/02/14 23:14	1
Toluene-d8 (Surr)	93		71 - 126		06/02/14 23:14	1
Dibromofluoromethane (Surr)	111		60 - 140		06/02/14 23:14	1

Lab Sample ID: LCS 480-185270/6

Matrix: Water

Analysis Batch: 185270

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	23.7		ug/L		95	74 - 124
Tetrachloroethene	25.0	23.2		ug/L		93	74 - 122
trans-1,2-Dichloroethene	25.0	22.2		ug/L		89	73 - 127
Trichloroethene	25.0	24.3		ug/L		97	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	119		66 - 137
4-Bromofluorobenzene (Surr)	103		73 - 120
Toluene-d8 (Surr)	94		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

Lab Sample ID: MB 480-185495/8

Matrix: Water

Analysis Batch: 185495

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/04/14 01:34	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/04/14 01:34	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/04/14 01:34	1
Trichloroethene	ND		1.0	0.46	ug/L			06/04/14 01:34	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/04/14 01:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		66 - 137		06/04/14 01:34	1
4-Bromofluorobenzene (Surr)	98		73 - 120		06/04/14 01:34	1
Toluene-d8 (Surr)	96		71 - 126		06/04/14 01:34	1
Dibromofluoromethane (Surr)	102		60 - 140		06/04/14 01:34	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-185495/6

Matrix: Water

Analysis Batch: 185495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	23.2		ug/L		93	74 - 124
Tetrachloroethene	25.0	22.0		ug/L		88	74 - 122
trans-1,2-Dichloroethene	25.0	22.1		ug/L		88	73 - 127
Trichloroethene	25.0	23.0		ug/L		92	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	101		73 - 120
Toluene-d8 (Surr)	96		71 - 126
Dibromofluoromethane (Surr)	106		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-184287/3

Matrix: Water

Analysis Batch: 184287

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/28/14 08:31	1
Ethene	ND		7.0	1.5	ug/L			05/28/14 08:31	1
Methane	ND		4.0	1.0	ug/L			05/28/14 08:31	1

Lab Sample ID: LCS 480-184287/4

Matrix: Water

Analysis Batch: 184287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	15.9		ug/L		109	52 - 138
Ethene	13.5	14.3		ug/L		106	50 - 137
Methane	7.69	8.43		ug/L		110	48 - 174

Lab Sample ID: LCSD 480-184287/5

Matrix: Water

Analysis Batch: 184287

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	15.5		ug/L		107	52 - 138	3	50
Ethene	13.5	14.4		ug/L		107	50 - 137	1	50
Methane	7.69	8.36		ug/L		109	48 - 174	1	50

Lab Sample ID: MB 200-72919/3

Matrix: Water

Analysis Batch: 72919

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/02/14 11:14	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 200-72919/2
 Matrix: Water
 Analysis Batch: 72919

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5340		ug/L		107	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-184445/1-A
 Matrix: Water
 Analysis Batch: 185085

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 184445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/29/14 09:00	05/30/14 16:37	1
Magnesium	ND		0.20	0.043	mg/L		05/29/14 09:00	05/30/14 16:37	1
Manganese	ND		0.0030	0.00040	mg/L		05/29/14 09:00	05/30/14 16:37	1

Lab Sample ID: LCS 480-184445/2-A
 Matrix: Water
 Analysis Batch: 185357

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 184445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.72		mg/L		107	80 - 120
Magnesium	10.0	11.21		mg/L		112	80 - 120
Manganese	0.200	0.216		mg/L		108	80 - 120

Lab Sample ID: 480-60591-1 MS
 Matrix: Water
 Analysis Batch: 185357

Client Sample ID: MW-7-1-052714
 Prep Type: Total/NA
 Prep Batch: 184445

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.42		10.0	10.29		mg/L		99	75 - 125
Magnesium	105		10.0	114.8	4	mg/L		100	75 - 125
Manganese	0.35		0.200	0.545		mg/L		97	75 - 125

Lab Sample ID: 480-60591-1 MSD
 Matrix: Water
 Analysis Batch: 185357

Client Sample ID: MW-7-1-052714
 Prep Type: Total/NA
 Prep Batch: 184445

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.42		10.0	10.71		mg/L		103	75 - 125	4	20
Magnesium	105		10.0	117.5	4	mg/L		127	75 - 125	2	20
Manganese	0.35		0.200	0.555		mg/L		102	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-184879/52
 Matrix: Water
 Analysis Batch: 184879

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/30/14 22:48	1
Sulfate	ND		2.0	0.35	mg/L			05/30/14 22:48	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Lab Sample ID: LCS 480-184879/51
Matrix: Water
Analysis Batch: 184879

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.31		mg/L		102	90 - 110
Sulfate	20.0	19.71		mg/L		99	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-184497/3
Matrix: Water
Analysis Batch: 184497

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 20:09	1

Lab Sample ID: MB 480-184497/51
Matrix: Water
Analysis Batch: 184497

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 20:52	1

Lab Sample ID: MB 480-184497/75
Matrix: Water
Analysis Batch: 184497

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/28/14 21:14	1

Lab Sample ID: LCS 480-184497/4
Matrix: Water
Analysis Batch: 184497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.991		mg/L		99	90 - 110

Lab Sample ID: LCS 480-184497/52
Matrix: Water
Analysis Batch: 184497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Lab Sample ID: LCS 480-184497/76
Matrix: Water
Analysis Batch: 184497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-184471/27
 Matrix: Water
 Analysis Batch: 184471

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/28/14 19:22	1

Lab Sample ID: MB 480-184471/3
 Matrix: Water
 Analysis Batch: 184471

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/28/14 18:55	1

Lab Sample ID: LCS 480-184471/28
 Matrix: Water
 Analysis Batch: 184471

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.47		mg/L		98	90 - 110

Lab Sample ID: LCS 480-184471/4
 Matrix: Water
 Analysis Batch: 184471

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.51		mg/L		101	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-185077/27
 Matrix: Water
 Analysis Batch: 185077

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/30/14 04:46	1

Lab Sample ID: MB 480-185077/3
 Matrix: Water
 Analysis Batch: 185077

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/29/14 16:48	1

Lab Sample ID: LCS 480-185077/28
 Matrix: Water
 Analysis Batch: 185077

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	61.68		mg/L		103	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-185077/4

Matrix: Water

Analysis Batch: 185077

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	65.25		mg/L		109	90 - 110

Lab Sample ID: 480-60591-2 MS

Matrix: Water

Analysis Batch: 185077

Client Sample ID: MW-7-5-052714

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	3.2		20.0	18.28		mg/L		75	54 - 131

Lab Sample ID: 480-60591-1 DU

Matrix: Water

Analysis Batch: 185077

Client Sample ID: MW-7-1-052714

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	1.2		1.21		mg/L		4	20

Lab Sample ID: MB 480-185396/3

Matrix: Water

Analysis Batch: 185396

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/01/14 13:49	1

Lab Sample ID: LCS 480-185396/4

Matrix: Water

Analysis Batch: 185396

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	64.97		mg/L		108	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-184660/6

Matrix: Water

Analysis Batch: 184660

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/29/14 10:06	1

Lab Sample ID: LCS 480-184660/7

Matrix: Water

Analysis Batch: 184660

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	93.86		mg/L		94	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/3

Matrix: Water

Analysis Batch: 185455

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 11:42	1

Lab Sample ID: LCS 480-185455/4

Matrix: Water

Analysis Batch: 185455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.716		mg/L		96	90 - 110

Lab Sample ID: 480-60591-3 MS

Matrix: Water

Analysis Batch: 185455

Client Sample ID: GW-Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.430	F1	mg/L		86	90 - 110

Lab Sample ID: 480-60591-3 MSD

Matrix: Water

Analysis Batch: 185455

Client Sample ID: GW-Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND		0.500	0.433	F1	mg/L		87	90 - 110	1	20

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

GC/MS VOA

Analysis Batch: 185270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	8260C	
LCS 480-185270/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185270/8	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 185495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-2	MW-7-5-052714	Total/NA	Water	8260C	
480-60591-3	GW-Duplicate	Total/NA	Water	8260C	
LCS 480-185495/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185495/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	RSK-175	
480-60591-2	MW-7-5-052714	Total/NA	Water	RSK-175	
480-60591-3	GW-Duplicate	Total/NA	Water	RSK-175	
LCS 200-72919/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72919/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 184287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	RSK-175	
480-60591-2	MW-7-5-052714	Total/NA	Water	RSK-175	
480-60591-3	GW-Duplicate	Total/NA	Water	RSK-175	
LCS 480-184287/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-184287/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-184287/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 184445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	3005A	
480-60591-1 MS	MW-7-1-052714	Total/NA	Water	3005A	
480-60591-1 MSD	MW-7-1-052714	Total/NA	Water	3005A	
480-60591-2	MW-7-5-052714	Total/NA	Water	3005A	
480-60591-3	GW-Duplicate	Total/NA	Water	3005A	
LCS 480-184445/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-184445/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-184445/1-A	Method Blank	Total/NA	Water	6010C	184445

Analysis Batch: 185357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	6010C	184445
480-60591-1 MS	MW-7-1-052714	Total/NA	Water	6010C	184445

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Metals (Continued)

Analysis Batch: 185357 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1 MSD	MW-7-1-052714	Total/NA	Water	6010C	184445
480-60591-2	MW-7-5-052714	Total/NA	Water	6010C	184445
480-60591-3	GW-Duplicate	Total/NA	Water	6010C	184445
LCS 480-184445/2-A	Lab Control Sample	Total/NA	Water	6010C	184445

General Chemistry

Analysis Batch: 184471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-2	MW-7-5-052714	Total/NA	Water	353.2	
480-60591-3	GW-Duplicate	Total/NA	Water	353.2	
LCS 480-184471/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-184471/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-184471/27	Method Blank	Total/NA	Water	353.2	
MB 480-184471/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 184495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	353.2	
480-60591-2	MW-7-5-052714	Total/NA	Water	353.2	
480-60591-3	GW-Duplicate	Total/NA	Water	353.2	

Analysis Batch: 184497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	350.1	
480-60591-2	MW-7-5-052714	Total/NA	Water	350.1	
480-60591-3	GW-Duplicate	Total/NA	Water	350.1	
LCS 480-184497/4	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184497/52	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184497/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-184497/3	Method Blank	Total/NA	Water	350.1	
MB 480-184497/51	Method Blank	Total/NA	Water	350.1	
MB 480-184497/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 184499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	353.2	

Analysis Batch: 184660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	SM 2320B	
480-60591-2	MW-7-5-052714	Total/NA	Water	SM 2320B	
480-60591-3	GW-Duplicate	Total/NA	Water	SM 2320B	
LCS 480-184660/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-184660/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 184879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	300.0	
480-60591-2	MW-7-5-052714	Total/NA	Water	300.0	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

General Chemistry (Continued)

Analysis Batch: 184879 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-3	GW-Duplicate	Total/NA	Water	300.0	
LCS 480-184879/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-184879/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	9060A	
480-60591-1 DU	MW-7-1-052714	Total/NA	Water	9060A	
480-60591-2	MW-7-5-052714	Total/NA	Water	9060A	
480-60591-2 MS	MW-7-5-052714	Total/NA	Water	9060A	
LCS 480-185077/28	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-185077/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-185077/27	Method Blank	Total/NA	Water	9060A	
MB 480-185077/3	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 185396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-3	GW-Duplicate	Total/NA	Water	9060A	
LCS 480-185396/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-185396/3	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60591-1	MW-7-1-052714	Total/NA	Water	SM 4500 S2 D	
480-60591-2	MW-7-5-052714	Total/NA	Water	SM 4500 S2 D	
480-60591-3	GW-Duplicate	Total/NA	Water	SM 4500 S2 D	
480-60591-3 MS	GW-Duplicate	Total/NA	Water	SM 4500 S2 D	
480-60591-3 MSD	GW-Duplicate	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: MW-7-1-052714

Lab Sample ID: 480-60591-1

Date Collected: 05/27/14 13:20

Matrix: Water

Date Received: 05/27/14 16:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	185270	06/02/14 23:52	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 15:47	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184287	05/28/14 09:37	MAN	TAL BUF
Total/NA	Prep	3005A			184445	05/29/14 09:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185357	06/02/14 14:06	MTM2	TAL BUF
Total/NA	Analysis	300.0		20	184879	05/30/14 22:58	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184497	05/28/14 21:27	RS	TAL BUF
Total/NA	Analysis	353.2		1	184495	05/28/14 16:17	RS	TAL BUF
Total/NA	Analysis	353.2		1	184499	05/28/14 16:17	RS	TAL BUF
Total/NA	Analysis	9060A		1	185077	05/30/14 07:45	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184660	05/29/14 11:19	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 11:53	KJ1	TAL BUF

Client Sample ID: MW-7-5-052714

Lab Sample ID: 480-60591-2

Date Collected: 05/27/14 16:45

Matrix: Water

Date Received: 05/27/14 16:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	185495	06/04/14 02:37	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 15:54	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184287	05/28/14 09:54	MAN	TAL BUF
Total/NA	Prep	3005A			184445	05/29/14 09:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185357	06/02/14 14:20	MTM2	TAL BUF
Total/NA	Analysis	300.0		50	184879	05/30/14 23:08	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184497	05/28/14 21:28	RS	TAL BUF
Total/NA	Analysis	353.2		1	184495	05/28/14 19:10	RS	TAL BUF
Total/NA	Analysis	353.2		1	184471	05/28/14 19:10	RS	TAL BUF
Total/NA	Analysis	9060A		1	185077	05/30/14 08:50	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184660	05/29/14 11:25	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 11:56	KJ1	TAL BUF

Client Sample ID: GW-Duplicate

Lab Sample ID: 480-60591-3

Date Collected: 05/27/14 00:00

Matrix: Water

Date Received: 05/27/14 16:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	185495	06/04/14 03:00	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	72919	06/02/14 16:03	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184287	05/28/14 10:20	MAN	TAL BUF
Total/NA	Prep	3005A			184445	05/29/14 09:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185357	06/02/14 14:32	MTM2	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Client Sample ID: GW-Duplicate

Lab Sample ID: 480-60591-3

Date Collected: 05/27/14 00:00

Matrix: Water

Date Received: 05/27/14 16:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50	184879	05/30/14 23:18	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184497	05/28/14 21:29	RS	TAL BUF
Total/NA	Analysis	353.2		1	184495	05/28/14 19:11	RS	TAL BUF
Total/NA	Analysis	353.2		1	184471	05/28/14 19:11	RS	TAL BUF
Total/NA	Analysis	9060A		1	185396	06/01/14 16:46	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184660	05/29/14 11:45	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 11:59	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60591-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60591-1	MW-7-1-052714	Water	05/27/14 13:20	05/27/14 16:40
480-60591-2	MW-7-5-052714	Water	05/27/14 16:45	05/27/14 16:40
480-60591-3	GW-Duplicate	Water	05/27/14 00:00	05/27/14 16:40

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Client Information
 Client Contact: J. Bohlen
 Mr. Tom Bohlen
 Company: 685-2300

Carrier Tracking No(s):
 COC No: 480-49375-13138.4
 Page: Page 4 of 4
 Job #:

480-60591 Chain of Custody

Analysis Requested

Due Date Requested:
 TAT Requested (days):
 PO #: 4062165
 WO #: 58507
 Project #: 48004014
 SSOW#:

Address: GZA GeoEnvironmental, Inc.
 535 Washington Street, 11th Floor
 City: Buffalo
 State, Zip: NY, 14203
 Email: thomas.bohlen@gza.com
 Project Name: 058507, GIM-Lockport Groundwater Sampling
 Site:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewer, Solid, Other)	Field Filtered Sample (Yes or No)	Pattern (MSD, Yes or No)	RSK_175_CO2 - Carbon dioxide	3501 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCB, TCE, DCE (trans and cis), Vinyl Chloride	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	333.2, 353.2 Nitrite, Nitrate, Calc	2220B - Total Alkalinity	300.0_2BD - Anions (Chloride & Sulfate)	Total Number of Containers	Special Instructions/Note:
MW-7-1-052714	5/27/14	1300	G	Water	W		X	X	X	X	X	X	X	X	X	X		
MW-7-5-052714		1645	G	Water	W		X	X	X	X	X	X	X	X	X	X		
GW-Duplicate			G	Water	W		X	X	X	X	X	X	X	X	X	X		
				Water	W													
				Water	W													
				Water	W													

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:
 Relinquished by: Thomas Bohlen Date: 5/27/14 Time: 1040
 Relinquished by: Company: GZA
 Relinquished by: Company: GZA
 Relinquished by: Company: GZA

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Received by: [Signature] Date/Time: 5/27/14 1640 Company: [Signature]
 Received by: [Signature] Date/Time: _____ Company: _____
 Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) and Other Remarks: 4.9 F



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60591-1

Login Number: 60591

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert K

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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.	False	Sample time for MW-7-5 (16:45) after receipt time.
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GZA
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60591-1

Login Number: 60591

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 05/29/14 02:33 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877535
Sample custody seals, if present, are intact.	N/A	
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	3.8°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60655-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/11/2014 5:10:02 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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Have a Question?



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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.

GC VOA

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.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Job ID: 480-60655-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60655-1

Receipt

The samples were received on 5/28/2014 6:22 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 10.8° C.

Except:

The following sample(s) was received at the laboratory outside the required temperature criteria. The samples are considered acceptable since it was collected and submitted to the laboratory on the same day.

GC/MS VOA

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: (480-60655-2 MS), (480-60655-2 MSD), MW-7-C-2-052814 (480-60655-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-6-052814 (480-60655-1). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-6-052814 (480-60655-1), MW-7-C-2-052814 (480-60655-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The method blank for batch 184632 contained Sulfate above the method detection limit (MDL). This target analyte concentration was less than the project-specific action limit; therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-6-052814 (480-60655-1), MW-7-C-2-052814 (480-60655-2). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Client Sample ID: MW-7-6-052814

Lab Sample ID: 480-60655-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	500		10	8.1	ug/L	10		8260C	Total/NA
Tetrachloroethene	570		10	3.6	ug/L	10		8260C	Total/NA
Trichloroethene	280		10	4.6	ug/L	10		8260C	Total/NA
Vinyl chloride	58		10	9.0	ug/L	10		8260C	Total/NA
Ethane	2.4	J	7.5	1.5	ug/L	1		RSK-175	Total/NA
Methane	110		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.44		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	81.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.18		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	3320		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	177	B	20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.030		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.15		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.5		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	376		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	11000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-C-2-052814

Lab Sample ID: 480-60655-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	410		5.0	4.1	ug/L	5		8260C	Total/NA
Vinyl chloride	12		5.0	4.5	ug/L	5		8260C	Total/NA
Methane	77		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.59		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	83.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.17		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	253		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	552		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.35		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.034	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.95	J	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	292		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	11000		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Client Sample ID: MW-7-6-052814

Lab Sample ID: 480-60655-1

Date Collected: 05/28/14 13:10

Matrix: Water

Date Received: 05/28/14 18:22

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	500		10	8.1	ug/L			06/05/14 15:58	10
Tetrachloroethene	570		10	3.6	ug/L			06/05/14 15:58	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			06/05/14 15:58	10
Trichloroethene	280		10	4.6	ug/L			06/05/14 15:58	10
Vinyl chloride	58		10	9.0	ug/L			06/05/14 15:58	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		66 - 137		06/05/14 15:58	10
4-Bromofluorobenzene (Surr)	94		73 - 120		06/05/14 15:58	10
Toluene-d8 (Surr)	94		71 - 126		06/05/14 15:58	10
Dibromofluoromethane (Surr)	115		60 - 140		06/05/14 15:58	10

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	2.4	J	7.5	1.5	ug/L			05/29/14 10:12	1
Ethene	ND		7.0	1.5	ug/L			05/29/14 10:12	1
Methane	110		4.0	1.0	ug/L			05/29/14 10:12	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	11000		1000	1000	ug/L			06/04/14 15:05	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.44		0.050	0.019	mg/L		05/29/14 09:00	05/29/14 20:57	1
Magnesium	81.0		0.20	0.043	mg/L		05/29/14 09:00	05/29/14 20:57	1
Manganese	0.18		0.0030	0.00040	mg/L		05/29/14 09:00	05/29/14 20:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3320		25.0	14.1	mg/L			06/02/14 17:04	50
Sulfate	177	B	20.0	3.5	mg/L			05/30/14 12:29	10
Ammonia	0.030		0.020	0.0090	mg/L			05/30/14 15:58	1
Nitrate	0.15		0.050	0.020	mg/L			05/30/14 01:25	1
Nitrite	ND		0.050	0.020	mg/L			05/30/14 01:25	1
Total Organic Carbon	1.5		1.0	0.43	mg/L			06/05/14 13:24	1
Total Alkalinity	376		5.0	0.79	mg/L			05/29/14 10:27	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 12:07	1

Client Sample ID: MW-7-C-2-052814

Lab Sample ID: 480-60655-2

Date Collected: 05/28/14 17:45

Matrix: Water

Date Received: 05/28/14 18:22

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	410		5.0	4.1	ug/L			06/04/14 08:48	5
Tetrachloroethene	ND		5.0	1.8	ug/L			06/04/14 08:48	5
trans-1,2-Dichloroethene	ND		5.0	4.5	ug/L			06/04/14 08:48	5
Trichloroethene	ND		5.0	2.3	ug/L			06/04/14 08:48	5
Vinyl chloride	12		5.0	4.5	ug/L			06/04/14 08:48	5

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Client Sample ID: MW-7-C-2-052814

Lab Sample ID: 480-60655-2

Date Collected: 05/28/14 17:45

Matrix: Water

Date Received: 05/28/14 18:22

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		66 - 137		06/04/14 08:48	5
4-Bromofluorobenzene (Surr)	98		73 - 120		06/04/14 08:48	5
Toluene-d8 (Surr)	97		71 - 126		06/04/14 08:48	5
Dibromofluoromethane (Surr)	106		60 - 140		06/04/14 08:48	5

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/29/14 10:29	1
Ethene	ND		7.0	1.5	ug/L			05/29/14 10:29	1
Methane	77		4.0	1.0	ug/L			05/29/14 10:29	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	11000		1000	1000	ug/L			06/04/14 15:13	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.59		0.050	0.019	mg/L		05/29/14 09:00	05/29/14 21:00	1
Magnesium	83.0		0.20	0.043	mg/L		05/29/14 09:00	05/29/14 21:00	1
Manganese	0.17		0.0030	0.00040	mg/L		05/29/14 09:00	05/29/14 21:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	253		5.0	2.8	mg/L			06/02/14 17:15	10
Sulfate	552		20.0	3.5	mg/L			06/02/14 17:15	10
Ammonia	0.35		0.020	0.0090	mg/L			05/30/14 15:59	1
Nitrate	0.034	J	0.050	0.020	mg/L			05/29/14 21:07	1
Nitrite	ND		0.050	0.020	mg/L			05/29/14 21:07	1
Total Organic Carbon	0.95	J	1.0	0.43	mg/L			06/05/14 13:53	1
Total Alkalinity	292		5.0	0.79	mg/L			05/29/14 10:34	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 12:15	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60655-1	MW-7-6-052814	123	94	94	115
480-60655-2	MW-7-C-2-052814	109	98	97	106
480-60655-2 MS	MW-7-C-2-052814	107	104	101	110
480-60655-2 MSD	MW-7-C-2-052814	106	103	100	108
LCS 480-185512/5	Lab Control Sample	109	102	101	107
LCS 480-185858/5	Lab Control Sample	116	101	102	116
MB 480-185512/7	Method Blank	116	98	97	110
MB 480-185858/7	Method Blank	123	94	95	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-185512/7

Matrix: Water

Analysis Batch: 185512

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/04/14 00:51	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/04/14 00:51	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/04/14 00:51	1
Trichloroethene	ND		1.0	0.46	ug/L			06/04/14 00:51	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/04/14 00:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		66 - 137		06/04/14 00:51	1
4-Bromofluorobenzene (Surr)	98		73 - 120		06/04/14 00:51	1
Toluene-d8 (Surr)	97		71 - 126		06/04/14 00:51	1
Dibromofluoromethane (Surr)	110		60 - 140		06/04/14 00:51	1

Lab Sample ID: LCS 480-185512/5

Matrix: Water

Analysis Batch: 185512

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	74 - 124
Tetrachloroethene	25.0	24.5		ug/L		98	74 - 122
trans-1,2-Dichloroethene	25.0	24.8		ug/L		99	73 - 127
Trichloroethene	25.0	25.5		ug/L		102	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Toluene-d8 (Surr)	101		71 - 126
Dibromofluoromethane (Surr)	107		60 - 140

Lab Sample ID: 480-60655-2 MS

Matrix: Water

Analysis Batch: 185512

Client Sample ID: MW-7-C-2-052814

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	410		125	542	E	ug/L		106	74 - 124
Tetrachloroethene	ND		125	125		ug/L		100	74 - 122
trans-1,2-Dichloroethene	ND		125	135		ug/L		108	73 - 127
Trichloroethene	ND		125	132		ug/L		106	74 - 123

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	104		73 - 120
Toluene-d8 (Surr)	101		71 - 126
Dibromofluoromethane (Surr)	110		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-60655-2 MSD

Matrix: Water

Analysis Batch: 185512

Client Sample ID: MW-7-C-2-052814

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	410		125	533	E	ug/L		98	74 - 124	2	15
Tetrachloroethene	ND		125	131		ug/L		105	74 - 122	5	20
trans-1,2-Dichloroethene	ND		125	139		ug/L		111	73 - 127	3	20
Trichloroethene	ND		125	135		ug/L		108	74 - 123	2	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		66 - 137
4-Bromofluorobenzene (Surr)	103		73 - 120
Toluene-d8 (Surr)	100		71 - 126
Dibromofluoromethane (Surr)	108		60 - 140

Lab Sample ID: MB 480-185858/7

Matrix: Water

Analysis Batch: 185858

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/05/14 13:31	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/05/14 13:31	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/05/14 13:31	1
Trichloroethene	ND		1.0	0.46	ug/L			06/05/14 13:31	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/05/14 13:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		66 - 137		06/05/14 13:31	1
4-Bromofluorobenzene (Surr)	94		73 - 120		06/05/14 13:31	1
Toluene-d8 (Surr)	95		71 - 126		06/05/14 13:31	1
Dibromofluoromethane (Surr)	116		60 - 140		06/05/14 13:31	1

Lab Sample ID: LCS 480-185858/5

Matrix: Water

Analysis Batch: 185858

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	22.9		ug/L		92	74 - 124
Tetrachloroethene	25.0	23.4		ug/L		94	74 - 122
trans-1,2-Dichloroethene	25.0	23.6		ug/L		94	73 - 127
Trichloroethene	25.0	23.4		ug/L		94	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	116		66 - 137
4-Bromofluorobenzene (Surr)	101		73 - 120
Toluene-d8 (Surr)	102		71 - 126
Dibromofluoromethane (Surr)	116		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-184556/3
Matrix: Water
Analysis Batch: 184556

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/29/14 09:09	1
Ethene	ND		7.0	1.5	ug/L			05/29/14 09:09	1
Methane	ND		4.0	1.0	ug/L			05/29/14 09:09	1

Lab Sample ID: LCS 480-184556/4
Matrix: Water
Analysis Batch: 184556

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.7		ug/L		101	52 - 138
Ethene	13.5	13.5		ug/L		100	50 - 137
Methane	7.69	7.94		ug/L		103	48 - 174

Lab Sample ID: LCSD 480-184556/5
Matrix: Water
Analysis Batch: 184556

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	14.8		ug/L		101	52 - 138	1	50
Ethene	13.5	13.3		ug/L		99	50 - 137	1	50
Methane	7.69	7.90		ug/L		103	48 - 174	1	50

Lab Sample ID: MB 200-73077/3
Matrix: Water
Analysis Batch: 73077

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:13	1

Lab Sample ID: LCS 200-73077/2
Matrix: Water
Analysis Batch: 73077

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5240		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-184523/1-A
Matrix: Water
Analysis Batch: 184772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 184523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/29/14 09:00	05/29/14 20:19	1
Magnesium	ND		0.20	0.043	mg/L		05/29/14 09:00	05/29/14 20:19	1
Manganese	ND		0.0030	0.00040	mg/L		05/29/14 09:00	05/29/14 20:19	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-184523/2-A

Matrix: Water

Analysis Batch: 184772

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 184523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.79		mg/L		98	80 - 120
Magnesium	10.0	9.82		mg/L		98	80 - 120
Manganese	0.200	0.192		mg/L		96	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-184632/124

Matrix: Water

Analysis Batch: 184632

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/30/14 11:58	1
Sulfate	0.366	J	2.0	0.35	mg/L			05/30/14 11:58	1

Lab Sample ID: LCS 480-184632/123

Matrix: Water

Analysis Batch: 184632

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.43		mg/L		97	90 - 110
Sulfate	20.0	20.61		mg/L		103	90 - 110

Lab Sample ID: MB 480-185157/28

Matrix: Water

Analysis Batch: 185157

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/02/14 16:24	1
Sulfate	ND		2.0	0.35	mg/L			06/02/14 16:24	1

Lab Sample ID: LCS 480-185157/27

Matrix: Water

Analysis Batch: 185157

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.66		mg/L		103	90 - 110
Sulfate	20.0	20.72		mg/L		104	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-184978/123

Matrix: Water

Analysis Batch: 184978

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/30/14 15:43	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-184978/75
 Matrix: Water
 Analysis Batch: 184978

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/30/14 15:01	1

Lab Sample ID: LCS 480-184978/124
 Matrix: Water
 Analysis Batch: 184978

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: LCS 480-184978/76
 Matrix: Water
 Analysis Batch: 184978

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.07		mg/L		107	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-184754/3
 Matrix: Water
 Analysis Batch: 184754

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/30/14 01:23	1

Lab Sample ID: LCS 480-184754/4
 Matrix: Water
 Analysis Batch: 184754

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.49		mg/L		99	90 - 110

Lab Sample ID: 480-60655-1 MS
 Matrix: Water
 Analysis Batch: 184754

Client Sample ID: MW-7-6-052814
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	1.04		mg/L		104	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186391/12
 Matrix: Water
 Analysis Batch: 186391

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/05/14 17:00	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 480-186391/3
Matrix: Water
Analysis Batch: 186391

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/05/14 08:28	1

Lab Sample ID: LCS 480-186391/13
Matrix: Water
Analysis Batch: 186391

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.33		mg/L		106	90 - 110

Lab Sample ID: LCS 480-186391/4
Matrix: Water
Analysis Batch: 186391

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	64.28		mg/L		107	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-184660/6
Matrix: Water
Analysis Batch: 184660

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/29/14 10:06	1

Lab Sample ID: LCS 480-184660/7
Matrix: Water
Analysis Batch: 184660

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	93.86		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/3
Matrix: Water
Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 11:42	1

Lab Sample ID: LCS 480-185455/4
Matrix: Water
Analysis Batch: 185455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.716		mg/L		96	90 - 110

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

GC/MS VOA

Analysis Batch: 185512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-2	MW-7-C-2-052814	Total/NA	Water	8260C	
480-60655-2 MS	MW-7-C-2-052814	Total/NA	Water	8260C	
480-60655-2 MSD	MW-7-C-2-052814	Total/NA	Water	8260C	
LCS 480-185512/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185512/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 185858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	8260C	
LCS 480-185858/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185858/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	RSK-175	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	RSK-175	
LCS 200-73077/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73077/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 184556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	RSK-175	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	RSK-175	
LCS 480-184556/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-184556/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-184556/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 184523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	3005A	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	3005A	
LCS 480-184523/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-184523/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 184772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	6010C	184523
480-60655-2	MW-7-C-2-052814	Total/NA	Water	6010C	184523
LCS 480-184523/2-A	Lab Control Sample	Total/NA	Water	6010C	184523
MB 480-184523/1-A	Method Blank	Total/NA	Water	6010C	184523

General Chemistry

Analysis Batch: 184632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	300.0	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

General Chemistry (Continued)

Analysis Batch: 184632 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-184632/123	Lab Control Sample	Total/NA	Water	300.0	
MB 480-184632/124	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 184660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	SM 2320B	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	SM 2320B	
LCS 480-184660/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-184660/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 184754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	353.2	
480-60655-1 MS	MW-7-6-052814	Total/NA	Water	353.2	
LCS 480-184754/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-184754/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 184755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	353.2	

Analysis Batch: 184756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-2	MW-7-C-2-052814	Total/NA	Water	353.2	

Analysis Batch: 184757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-2	MW-7-C-2-052814	Total/NA	Water	353.2	

Analysis Batch: 184978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	350.1	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	350.1	
LCS 480-184978/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-184978/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-184978/123	Method Blank	Total/NA	Water	350.1	
MB 480-184978/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 185157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	300.0	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	300.0	
LCS 480-185157/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185157/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	SM 4500 S2 D	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

General Chemistry (Continued)

Analysis Batch: 186391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60655-1	MW-7-6-052814	Total/NA	Water	9060A	
480-60655-2	MW-7-C-2-052814	Total/NA	Water	9060A	
LCS 480-186391/13	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-186391/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186391/12	Method Blank	Total/NA	Water	9060A	
MB 480-186391/3	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Client Sample ID: MW-7-6-052814

Lab Sample ID: 480-60655-1

Date Collected: 05/28/14 13:10

Matrix: Water

Date Received: 05/28/14 18:22

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	185858	06/05/14 15:58	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 15:05	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184556	05/29/14 10:12	MAN	TAL BUF
Total/NA	Prep	3005A			184523	05/29/14 09:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184772	05/29/14 20:57	MTM2	TAL BUF
Total/NA	Analysis	300.0		50	185157	06/02/14 17:04	KRC	TAL BUF
Total/NA	Analysis	300.0		10	184632	05/30/14 12:29	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184978	05/30/14 15:58	RS	TAL BUF
Total/NA	Analysis	353.2		1	184754	05/30/14 01:25	KS	TAL BUF
Total/NA	Analysis	353.2		1	184755	05/30/14 01:25	KS	TAL BUF
Total/NA	Analysis	9060A		1	186391	06/05/14 13:24	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184660	05/29/14 10:27	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 12:07	KJ1	TAL BUF

Client Sample ID: MW-7-C-2-052814

Lab Sample ID: 480-60655-2

Date Collected: 05/28/14 17:45

Matrix: Water

Date Received: 05/28/14 18:22

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	185512	06/04/14 08:48	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 15:13	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184556	05/29/14 10:29	MAN	TAL BUF
Total/NA	Prep	3005A			184523	05/29/14 09:00	EHD	TAL BUF
Total/NA	Analysis	6010C		1	184772	05/29/14 21:00	MTM2	TAL BUF
Total/NA	Analysis	300.0		10	185157	06/02/14 17:15	KRC	TAL BUF
Total/NA	Analysis	350.1		1	184978	05/30/14 15:59	RS	TAL BUF
Total/NA	Analysis	353.2		1	184756	05/29/14 21:07	KS	TAL BUF
Total/NA	Analysis	353.2		1	184757	05/29/14 21:07	KS	TAL BUF
Total/NA	Analysis	9060A		1	186391	06/05/14 13:53	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184660	05/29/14 10:34	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 12:15	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60655-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60655-1	MW-7-6-052814	Water	05/28/14 13:10	05/28/14 18:22
480-60655-2	MW-7-C-2-052814	Water	05/28/14 17:45	05/28/14 18:22

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Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60655-1

Login Number: 60655

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	Yes: Received same day of collection; chilling process has begun
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60655-1

Login Number: 60655

List Number: 2

Creator: Gagne, Eric M

List Source: TestAmerica Burlington

List Creation: 06/02/14 10:52 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877549
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	18.6°C. IR GUN ID 181. CF = 0
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	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	No sample times on container labels.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60765-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/10/2014 11:15:50 AM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Qualifiers

GC VOA

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.

General Chemistry

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.
F1	MS and/or MSD Recovery exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Job ID: 480-60765-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60765-1

Receipt

The samples were received on 5/29/2014 5:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-8-052914 (480-60765-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-7-052914 (480-60765-1). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-7-052914 (480-60765-1), MW-7-8-052914 (480-60765-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: (480-60765-1 MS), MW-7-7-052914 (480-60765-1), MW-7-8-052914 (480-60765-2). Elevated reporting limits (RLs) are provided.

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

GC VOA

Method(s) RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-7-7-052914 (480-60765-1). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Client Sample ID: MW-7-7-052914

Lab Sample ID: 480-60765-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8700		1000	810	ug/L	1000		8260C	Total/NA
Tetrachloroethene	76000		1000	360	ug/L	1000		8260C	Total/NA
Trichloroethene	3400		1000	460	ug/L	1000		8260C	Total/NA
Vinyl chloride	1800		1000	900	ug/L	1000		8260C	Total/NA
Ethene	260	J	350	75	ug/L	50		RSK-175	Total/NA
Methane	580		200	50	ug/L	50		RSK-175	Total/NA
Iron	0.48		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	46.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.016		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	926		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	135		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	1.2		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.91		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.034	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	13.7		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	59.3		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.80		0.10	0.052	mg/L	1		SM 4500 S2 D	Total/NA

Client Sample ID: MW-7-8-052914

Lab Sample ID: 480-60765-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	84		4.0	3.2	ug/L	4		8260C	Total/NA
Tetrachloroethene	180		4.0	1.4	ug/L	4		8260C	Total/NA
Trichloroethene	110		4.0	1.8	ug/L	4		8260C	Total/NA
Vinyl chloride	7.1		4.0	3.6	ug/L	4		8260C	Total/NA
Methane	43		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	2.3		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	172		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.10		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	2540		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	110		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.078		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	0.84	J	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	86.2		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Client Sample ID: MW-7-7-052914

Lab Sample ID: 480-60765-1

Date Collected: 05/29/14 15:40

Matrix: Water

Date Received: 05/29/14 17:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	8700		1000	810	ug/L			06/09/14 02:41	1000
Tetrachloroethene	76000		1000	360	ug/L			06/09/14 02:41	1000
trans-1,2-Dichloroethene	ND		1000	900	ug/L			06/09/14 02:41	1000
Trichloroethene	3400		1000	460	ug/L			06/09/14 02:41	1000
Vinyl chloride	1800		1000	900	ug/L			06/09/14 02:41	1000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		66 - 137		06/09/14 02:41	1000
4-Bromofluorobenzene (Surr)	100		73 - 120		06/09/14 02:41	1000
Toluene-d8 (Surr)	106		71 - 126		06/09/14 02:41	1000
Dibromofluoromethane (Surr)	105		60 - 140		06/09/14 02:41	1000

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		380	75	ug/L			05/30/14 09:43	50
Ethene	260	J	350	75	ug/L			05/30/14 09:43	50
Methane	580		200	50	ug/L			05/30/14 09:43	50
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:48	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.48		0.050	0.019	mg/L		05/30/14 13:05	05/31/14 11:27	1
Magnesium	46.0		0.20	0.043	mg/L		05/30/14 13:05	05/31/14 11:27	1
Manganese	0.016		0.0030	0.00040	mg/L		05/30/14 13:05	05/31/14 11:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	926		10.0	5.6	mg/L			06/02/14 22:19	20
Sulfate	135		40.0	7.0	mg/L			06/03/14 17:29	20
Ammonia	1.2		0.020	0.0090	mg/L			06/02/14 20:15	1
Nitrate	0.91		0.050	0.020	mg/L			05/30/14 02:35	1
Nitrite	0.034	J	0.050	0.020	mg/L			05/30/14 02:35	1
Total Organic Carbon	13.7		1.0	0.43	mg/L			06/03/14 00:01	1
Total Alkalinity	59.3		5.0	0.79	mg/L			05/30/14 11:34	1
Sulfide	0.80		0.10	0.052	mg/L			06/03/14 13:35	1

Client Sample ID: MW-7-8-052914

Lab Sample ID: 480-60765-2

Date Collected: 05/29/14 16:25

Matrix: Water

Date Received: 05/29/14 17:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	84		4.0	3.2	ug/L			06/07/14 21:30	4
Tetrachloroethene	180		4.0	1.4	ug/L			06/07/14 21:30	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			06/07/14 21:30	4
Trichloroethene	110		4.0	1.8	ug/L			06/07/14 21:30	4
Vinyl chloride	7.1		4.0	3.6	ug/L			06/07/14 21:30	4

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Client Sample ID: MW-7-8-052914

Lab Sample ID: 480-60765-2

Date Collected: 05/29/14 16:25

Matrix: Water

Date Received: 05/29/14 17:15

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137		06/07/14 21:30	4
4-Bromofluorobenzene (Surr)	101		73 - 120		06/07/14 21:30	4
Toluene-d8 (Surr)	102		71 - 126		06/07/14 21:30	4
Dibromofluoromethane (Surr)	111		60 - 140		06/07/14 21:30	4

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/30/14 10:11	1
Ethene	ND		7.0	1.5	ug/L			05/30/14 10:11	1
Methane	43		4.0	1.0	ug/L			05/30/14 10:11	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:56	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	2.3		0.050	0.019	mg/L		05/30/14 13:05	05/31/14 11:16	1
Magnesium	172		0.20	0.043	mg/L		05/30/14 13:05	05/31/14 11:16	1
Manganese	0.10		0.0030	0.00040	mg/L		05/30/14 13:05	05/31/14 11:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2540		25.0	14.1	mg/L			06/02/14 22:29	50
Sulfate	110		20.0	3.5	mg/L			06/03/14 18:09	10
Ammonia	0.078		0.020	0.0090	mg/L			06/02/14 20:16	1
Nitrate	ND		0.050	0.020	mg/L			05/30/14 02:36	1
Nitrite	ND		0.050	0.020	mg/L			05/30/14 02:36	1
Total Organic Carbon	0.84 J		1.0	0.43	mg/L			06/03/14 03:00	1
Total Alkalinity	86.2		5.0	0.79	mg/L			05/30/14 11:40	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:38	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60765-1	MW-7-7-052914	106	100	106	105
480-60765-2	MW-7-8-052914	108	101	102	111
LCS 480-186338/6	Lab Control Sample	107	106	105	111
LCS 480-186377/5	Lab Control Sample	103	100	101	101
MB 480-186338/7	Method Blank	108	104	106	110
MB 480-186377/6	Method Blank	103	104	105	103

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-186338/7

Matrix: Water

Analysis Batch: 186338

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/07/14 13:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/07/14 13:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/07/14 13:49	1
Trichloroethene	ND		1.0	0.46	ug/L			06/07/14 13:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/07/14 13:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137		06/07/14 13:49	1
4-Bromofluorobenzene (Surr)	104		73 - 120		06/07/14 13:49	1
Toluene-d8 (Surr)	106		71 - 126		06/07/14 13:49	1
Dibromofluoromethane (Surr)	110		60 - 140		06/07/14 13:49	1

Lab Sample ID: LCS 480-186338/6

Matrix: Water

Analysis Batch: 186338

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	74 - 124
Tetrachloroethene	25.0	25.0		ug/L		100	74 - 122
trans-1,2-Dichloroethene	25.0	26.1		ug/L		104	73 - 127
Trichloroethene	25.0	25.6		ug/L		102	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	106		73 - 120
Toluene-d8 (Surr)	105		71 - 126
Dibromofluoromethane (Surr)	111		60 - 140

Lab Sample ID: MB 480-186377/6

Matrix: Water

Analysis Batch: 186377

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/08/14 22:48	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/08/14 22:48	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/08/14 22:48	1
Trichloroethene	ND		1.0	0.46	ug/L			06/08/14 22:48	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/08/14 22:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		66 - 137		06/08/14 22:48	1
4-Bromofluorobenzene (Surr)	104		73 - 120		06/08/14 22:48	1
Toluene-d8 (Surr)	105		71 - 126		06/08/14 22:48	1
Dibromofluoromethane (Surr)	103		60 - 140		06/08/14 22:48	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-186377/5

Matrix: Water

Analysis Batch: 186377

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	74 - 124
Tetrachloroethene	25.0	25.7		ug/L		103	74 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	25.7		ug/L		103	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 137
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	101		71 - 126
Dibromofluoromethane (Surr)	101		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-184791/3

Matrix: Water

Analysis Batch: 184791

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/30/14 08:05	1
Ethene	ND		7.0	1.5	ug/L			05/30/14 08:05	1
Methane	ND		4.0	1.0	ug/L			05/30/14 08:05	1

Lab Sample ID: LCS 480-184791/4

Matrix: Water

Analysis Batch: 184791

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	12.7		ug/L		87	52 - 138
Ethene	13.5	11.7		ug/L		87	50 - 137
Methane	7.69	6.51		ug/L		85	48 - 174

Lab Sample ID: LCSD 480-184791/5

Matrix: Water

Analysis Batch: 184791

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	12.0		ug/L		82	52 - 138	6	50
Ethene	13.5	10.9		ug/L		81	50 - 137	7	50
Methane	7.69	6.09		ug/L		79	48 - 174	7	50

Lab Sample ID: MB 200-73077/3

Matrix: Water

Analysis Batch: 73077

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:13	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 200-73077/2
 Matrix: Water
 Analysis Batch: 73077

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5240		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-184857/1-A
 Matrix: Water
 Analysis Batch: 185143

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 184857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/30/14 13:05	05/31/14 10:40	1
Magnesium	ND		0.20	0.043	mg/L		05/30/14 13:05	05/31/14 10:40	1
Manganese	ND		0.0030	0.00040	mg/L		05/30/14 13:05	05/31/14 10:40	1

Lab Sample ID: LCS 480-184857/2-A
 Matrix: Water
 Analysis Batch: 185143

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 184857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.12		mg/L		101	80 - 120
Magnesium	10.0	10.44		mg/L		104	80 - 120
Manganese	0.200	0.203		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185159/52
 Matrix: Water
 Analysis Batch: 185159

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/02/14 20:27	1
Sulfate	ND	^	2.0	0.35	mg/L			06/02/14 20:27	1

Lab Sample ID: LCS 480-185159/51
 Matrix: Water
 Analysis Batch: 185159

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.43		mg/L		102	90 - 110
Sulfate	20.0	20.81	^	mg/L		104	90 - 110

Lab Sample ID: MB 480-185421/4
 Matrix: Water
 Analysis Batch: 185421

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/03/14 16:18	1
Sulfate	ND		2.0	0.35	mg/L			06/03/14 16:18	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-185421/3

Matrix: Water

Analysis Batch: 185421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.52		mg/L		103	90 - 110
Sulfate	20.0	19.85		mg/L		99	90 - 110

Lab Sample ID: 480-60765-1 MS

Matrix: Water

Analysis Batch: 185421

Client Sample ID: MW-7-7-052914

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	135		500	663.7		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185294/39

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/02/14 19:51	1

Lab Sample ID: MB 480-185294/63

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/02/14 20:12	1

Lab Sample ID: LCS 480-185294/40

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.02		mg/L		102	90 - 110

Lab Sample ID: LCS 480-185294/64

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.01		mg/L		101	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-184754/51

Matrix: Water

Analysis Batch: 184754

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/30/14 02:16	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: LCS 480-184754/52

Matrix: Water

Analysis Batch: 184754

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.53		mg/L		102	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-185763/11

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/03/14 02:01	1

Lab Sample ID: MB 480-185763/3

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/02/14 17:39	1

Lab Sample ID: MB 480-185763/50

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/03/14 23:50	1

Lab Sample ID: LCS 480-185763/12

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.44		mg/L		106	90 - 110

Lab Sample ID: LCS 480-185763/4

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.61		mg/L		106	90 - 110

Lab Sample ID: LCS 480-185763/51

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.80		mg/L		106	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 480-60765-1 MS
 Matrix: Water
 Analysis Batch: 185763

Client Sample ID: MW-7-7-052914
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	13.7		20.0	29.38		mg/L		78	54 - 131

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-184934/6
 Matrix: Water
 Analysis Batch: 184934

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/30/14 11:20	1

Lab Sample ID: LCS 480-184934/7
 Matrix: Water
 Analysis Batch: 184934

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.37		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/41
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:27	1

Lab Sample ID: LCS 480-185455/42
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.719		mg/L		96	90 - 110

Lab Sample ID: 480-60765-2 MS
 Matrix: Water
 Analysis Batch: 185455

Client Sample ID: MW-7-8-052914
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.333	F1	mg/L		67	90 - 110

Lab Sample ID: 480-60765-2 MSD
 Matrix: Water
 Analysis Batch: 185455

Client Sample ID: MW-7-8-052914
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND		0.500	0.331	F1	mg/L		66	90 - 110	1	20

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

GC/MS VOA

Analysis Batch: 186338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-2	MW-7-8-052914	Total/NA	Water	8260C	
LCS 480-186338/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186338/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 186377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	8260C	
LCS 480-186377/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186377/6	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	RSK-175	
480-60765-2	MW-7-8-052914	Total/NA	Water	RSK-175	
LCS 200-73077/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73077/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 184791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	RSK-175	
480-60765-2	MW-7-8-052914	Total/NA	Water	RSK-175	
LCS 480-184791/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-184791/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-184791/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 184857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	3005A	
480-60765-2	MW-7-8-052914	Total/NA	Water	3005A	
LCS 480-184857/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-184857/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	6010C	184857
480-60765-2	MW-7-8-052914	Total/NA	Water	6010C	184857
LCS 480-184857/2-A	Lab Control Sample	Total/NA	Water	6010C	184857
MB 480-184857/1-A	Method Blank	Total/NA	Water	6010C	184857

General Chemistry

Analysis Batch: 184754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	353.2	
480-60765-2	MW-7-8-052914	Total/NA	Water	353.2	
LCS 480-184754/52	Lab Control Sample	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

General Chemistry (Continued)

Analysis Batch: 184754 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-184754/51	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 184755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	353.2	
480-60765-2	MW-7-8-052914	Total/NA	Water	353.2	

Analysis Batch: 184934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	SM 2320B	
480-60765-2	MW-7-8-052914	Total/NA	Water	SM 2320B	
LCS 480-184934/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-184934/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	300.0	
480-60765-2	MW-7-8-052914	Total/NA	Water	300.0	
LCS 480-185159/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185159/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	350.1	
480-60765-2	MW-7-8-052914	Total/NA	Water	350.1	
LCS 480-185294/40	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-185294/64	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185294/39	Method Blank	Total/NA	Water	350.1	
MB 480-185294/63	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 185421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	300.0	
480-60765-1 MS	MW-7-7-052914	Total/NA	Water	300.0	
480-60765-2	MW-7-8-052914	Total/NA	Water	300.0	
LCS 480-185421/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185421/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	SM 4500 S2 D	
480-60765-2	MW-7-8-052914	Total/NA	Water	SM 4500 S2 D	
480-60765-2 MS	MW-7-8-052914	Total/NA	Water	SM 4500 S2 D	
480-60765-2 MSD	MW-7-8-052914	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/42	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/41	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 185763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-1	MW-7-7-052914	Total/NA	Water	9060A	
480-60765-1 MS	MW-7-7-052914	Total/NA	Water	9060A	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

General Chemistry (Continued)

Analysis Batch: 185763 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60765-2	MW-7-8-052914	Total/NA	Water	9060A	
LCS 480-185763/12	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-185763/4	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-185763/51	Lab Control Sample	Total/NA	Water	9060A	
MB 480-185763/11	Method Blank	Total/NA	Water	9060A	
MB 480-185763/3	Method Blank	Total/NA	Water	9060A	
MB 480-185763/50	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Client Sample ID: MW-7-7-052914

Lab Sample ID: 480-60765-1

Date Collected: 05/29/14 15:40

Matrix: Water

Date Received: 05/29/14 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1000	186377	06/09/14 02:41	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 14:48	NEA	TAL BUR
Total/NA	Analysis	RSK-175		50	184791	05/30/14 09:43	MAN	TAL BUF
Total/NA	Prep	3005A			184857	05/30/14 13:05	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185143	05/31/14 11:27	JRK	TAL BUF
Total/NA	Analysis	300.0		20	185159	06/02/14 22:19	KRC	TAL BUF
Total/NA	Analysis	300.0		20	185421	06/03/14 17:29	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185294	06/02/14 20:15	RS	TAL BUF
Total/NA	Analysis	353.2		1	184754	05/30/14 02:35	KS	TAL BUF
Total/NA	Analysis	353.2		1	184755	05/30/14 02:35	KS	TAL BUF
Total/NA	Analysis	9060A		1	185763	06/03/14 00:01	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184934	05/30/14 11:34	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 13:35	KJ1	TAL BUF

Client Sample ID: MW-7-8-052914

Lab Sample ID: 480-60765-2

Date Collected: 05/29/14 16:25

Matrix: Water

Date Received: 05/29/14 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	186338	06/07/14 21:30	CDC	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 14:56	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184791	05/30/14 10:11	MAN	TAL BUF
Total/NA	Prep	3005A			184857	05/30/14 13:05	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185143	05/31/14 11:16	JRK	TAL BUF
Total/NA	Analysis	300.0		50	185159	06/02/14 22:29	KRC	TAL BUF
Total/NA	Analysis	300.0		10	185421	06/03/14 18:09	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185294	06/02/14 20:16	RS	TAL BUF
Total/NA	Analysis	353.2		1	184754	05/30/14 02:36	KS	TAL BUF
Total/NA	Analysis	353.2		1	184755	05/30/14 02:36	KS	TAL BUF
Total/NA	Analysis	9060A		1	185763	06/03/14 03:00	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184934	05/30/14 11:40	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 13:38	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14
Virginia	NELAP	3	460209	12-14-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60765-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60765-1	MW-7-7-052914	Water	05/29/14 15:40	05/29/14 17:15
480-60765-2	MW-7-8-052914	Water	05/29/14 16:25	05/29/14 17:15

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TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2298
 Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
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Client Information		Lab P/N: Deyo, Melissa L		Carrier Tracking No(s): 480-49375-13138.4	
Client Contact: Mr. Tom Bohlen		E-Mail: melissa.deyo@testamericainc.com		Page 4 of 4	
Company: GZA GeoEnvironmental, Inc.		Address: 535 Washington Street 11th Floor		Job #:	
City: Buffalo		State, Zip: NY, 14203		Preservation Codes:	
Phone: 4062165		PO #: 4062165		A - HCL	
Email: thomas.bohlen@gza.com		WO #: 58507		M - Hexane	
Project Name: 058507, GM-Lockport Groundwater Sampling		Project #: 48004014		N - None	
Site:		SSOW#:		O - AsNaO2	
Due Date Requested:		TAT Requested (days):		P - Na2O4S	
Sample Identification		Sample Date		Q - NaHSO4	
MW-7-7-052914	5/29/14 1540 G	Water	Sample Type (C-Comp, G-grab)	R - Na2S2O3	
MW-7-8-052914	↓ 1625 G	Water	Matrix (W-water, S-solid, O-ore/sediment, BT-tissue, A-air)	S - H2SO4	
		Water	Sample Time	T - TSP Dodecahydrate	
		Water	Sample Date	U - Acetone	
		Water	Sample Time	V - MCAA	
		Water	Sample Date	W - ph 4-5	
		Water	Sample Time	X - EDTA	
		Water	Sample Date	L - EDA	
		Water	Sample Time	Z - other (specify)	
		Water	Sample Date	Other:	
Possible Hazard Identification		Date/Time: 5/29/14 17:15		Total Number of Containers:	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological
Deliverable Requested: I, II, III, IV, Other (specify)		Date/Time: 5/29/14 17:15		Special Instructions/Note:	
Empty Kit Relinquished by: Thomas Bohlen		Date/Time: 5/29/14 17:15		480-60765 Chain of Custody	
Relinquished by: Thomas Bohlen		Date/Time: 5/29/14 17:15		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Relinquished by:		Date/Time:		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Relinquished by:		Date/Time:		Special Instructions/QC Requirements:	
Relinquished by:		Date/Time:		Method of Shipment:	
Relinquished by:		Date/Time:		Received by: William Wulke	
Relinquished by:		Date/Time:		Received by:	
Relinquished by:		Date/Time:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: 318 #1		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60765-1

Login Number: 60765

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60765-1

Login Number: 60765

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 05/31/14 03:17 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877558
Sample custody seals, if present, are intact.	N/A	
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	2.2°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60766-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/9/2014 12:35:49 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Qualifiers

General Chemistry

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.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Job ID: 480-60766-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60766-1

Receipt

The sample was received on 5/29/2014 5:15 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

Method(s) 8260C: The following volatiles sample(s) was diluted due to foaming at the time of purging during the original sample analysis: MW-8-003-B-052914 (480-60766-1). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-8-003-B-052914 (480-60766-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Client Sample ID: MW-8-003-B-052914

Lab Sample ID: 480-60766-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	220		25	20	ug/L	25		8260C	Total/NA
Tetrachloroethene	55		25	9.0	ug/L	25		8260C	Total/NA
Trichloroethene	46		25	12	ug/L	25		8260C	Total/NA
Vinyl chloride	31		25	23	ug/L	25		8260C	Total/NA
Methane	7.6		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.52		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	10.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.18		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1270		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	78.5		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.014	J	0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.62		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	4.0		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	160		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Client Sample ID: MW-8-003-B-052914

Lab Sample ID: 480-60766-1

Date Collected: 05/29/14 11:30

Matrix: Water

Date Received: 05/29/14 17:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	220		25	20	ug/L			06/05/14 03:52	25
Tetrachloroethene	55		25	9.0	ug/L			06/05/14 03:52	25
trans-1,2-Dichloroethene	ND		25	23	ug/L			06/05/14 03:52	25
Trichloroethene	46		25	12	ug/L			06/05/14 03:52	25
Vinyl chloride	31		25	23	ug/L			06/05/14 03:52	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		66 - 137		06/05/14 03:52	25
4-Bromofluorobenzene (Surr)	104		73 - 120		06/05/14 03:52	25
Toluene-d8 (Surr)	97		71 - 126		06/05/14 03:52	25
Dibromofluoromethane (Surr)	107		60 - 140		06/05/14 03:52	25

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/30/14 10:42	1
Ethene	ND		7.0	1.5	ug/L			05/30/14 10:42	1
Methane	7.6		4.0	1.0	ug/L			05/30/14 10:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:39	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.52		0.050	0.019	mg/L		05/30/14 13:05	05/31/14 11:13	1
Magnesium	10.7		0.20	0.043	mg/L		05/30/14 13:05	05/31/14 11:13	1
Manganese	0.18		0.0030	0.00040	mg/L		05/30/14 13:05	05/31/14 11:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1270		10.0	5.6	mg/L			06/03/14 18:19	20
Sulfate	78.5		40.0	7.0	mg/L			06/03/14 18:19	20
Ammonia	0.014	J	0.020	0.0090	mg/L			06/02/14 20:17	1
Nitrate	0.62		0.050	0.020	mg/L			05/30/14 00:18	1
Nitrite	ND		0.050	0.020	mg/L			05/30/14 00:18	1
Total Organic Carbon	4.0		1.0	0.43	mg/L			06/03/14 03:30	1
Total Alkalinity	160		5.0	0.79	mg/L			05/30/14 11:46	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:46	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-60766-1	MW-8-003-B-052914	106	104	97	107
LCS 480-185707/6	Lab Control Sample	103	105	101	103
MB 480-185707/8	Method Blank	107	104	98	102

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-185707/8

Matrix: Water

Analysis Batch: 185707

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/04/14 22:33	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/04/14 22:33	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/04/14 22:33	1
Trichloroethene	ND		1.0	0.46	ug/L			06/04/14 22:33	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/04/14 22:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		66 - 137		06/04/14 22:33	1
4-Bromofluorobenzene (Surr)	104		73 - 120		06/04/14 22:33	1
Toluene-d8 (Surr)	98		71 - 126		06/04/14 22:33	1
Dibromofluoromethane (Surr)	102		60 - 140		06/04/14 22:33	1

Lab Sample ID: LCS 480-185707/6

Matrix: Water

Analysis Batch: 185707

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	23.8		ug/L		95	74 - 124
Tetrachloroethene	25.0	25.4		ug/L		102	74 - 122
trans-1,2-Dichloroethene	25.0	23.3		ug/L		93	73 - 127
Trichloroethene	25.0	24.6		ug/L		98	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	101		71 - 126
Dibromofluoromethane (Surr)	103		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-184791/3

Matrix: Water

Analysis Batch: 184791

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/30/14 08:05	1
Ethene	ND		7.0	1.5	ug/L			05/30/14 08:05	1
Methane	ND		4.0	1.0	ug/L			05/30/14 08:05	1

Lab Sample ID: LCS 480-184791/4

Matrix: Water

Analysis Batch: 184791

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	12.7		ug/L		87	52 - 138
Ethene	13.5	11.7		ug/L		87	50 - 137
Methane	7.69	6.51		ug/L		85	48 - 174

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-184791/5

Matrix: Water

Analysis Batch: 184791

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	12.0		ug/L		82	52 - 138	6	50
Ethene	13.5	10.9		ug/L		81	50 - 137	7	50
Methane	7.69	6.09		ug/L		79	48 - 174	7	50

Lab Sample ID: MB 200-73077/3

Matrix: Water

Analysis Batch: 73077

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:13	1

Lab Sample ID: LCS 200-73077/2

Matrix: Water

Analysis Batch: 73077

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5240		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-184857/1-A

Matrix: Water

Analysis Batch: 185143

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 184857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/30/14 13:05	05/31/14 10:40	1
Magnesium	ND		0.20	0.043	mg/L		05/30/14 13:05	05/31/14 10:40	1
Manganese	ND		0.0030	0.00040	mg/L		05/30/14 13:05	05/31/14 10:40	1

Lab Sample ID: LCS 480-184857/2-A

Matrix: Water

Analysis Batch: 185143

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 184857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.12		mg/L		101	80 - 120
Magnesium	10.0	10.44		mg/L		104	80 - 120
Manganese	0.200	0.203		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185421/4

Matrix: Water

Analysis Batch: 185421

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/03/14 16:18	1
Sulfate	ND		2.0	0.35	mg/L			06/03/14 16:18	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-185421/3

Matrix: Water

Analysis Batch: 185421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.52		mg/L		103	90 - 110
Sulfate	20.0	19.85		mg/L		99	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185294/39

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/02/14 19:51	1

Lab Sample ID: MB 480-185294/63

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/02/14 20:12	1

Lab Sample ID: LCS 480-185294/40

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.02		mg/L		102	90 - 110

Lab Sample ID: LCS 480-185294/64

Matrix: Water

Analysis Batch: 185294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.01		mg/L		101	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-185763/11

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/03/14 02:01	1

Lab Sample ID: MB 480-185763/3

Matrix: Water

Analysis Batch: 185763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/02/14 17:39	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 480-185763/50
Matrix: Water
Analysis Batch: 185763

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/03/14 23:50	1

Lab Sample ID: LCS 480-185763/12
Matrix: Water
Analysis Batch: 185763

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.44		mg/L		106	90 - 110

Lab Sample ID: LCS 480-185763/4
Matrix: Water
Analysis Batch: 185763

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.61		mg/L		106	90 - 110

Lab Sample ID: LCS 480-185763/51
Matrix: Water
Analysis Batch: 185763

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.80		mg/L		106	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-184934/6
Matrix: Water
Analysis Batch: 184934

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/30/14 11:20	1

Lab Sample ID: LCS 480-184934/7
Matrix: Water
Analysis Batch: 184934

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.37		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/41
Matrix: Water
Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:27	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCS 480-185455/42

Matrix: Water

Analysis Batch: 185455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.719		mg/L		96	90 - 110

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QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

GC/MS VOA

Analysis Batch: 185707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	8260C	
LCS 480-185707/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-185707/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	RSK-175	
LCS 200-73077/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73077/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 184791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	RSK-175	
LCS 480-184791/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-184791/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-184791/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 184857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	3005A	
LCS 480-184857/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-184857/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	6010C	184857
LCS 480-184857/2-A	Lab Control Sample	Total/NA	Water	6010C	184857
MB 480-184857/1-A	Method Blank	Total/NA	Water	6010C	184857

General Chemistry

Analysis Batch: 184756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	353.2	

Analysis Batch: 184757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	353.2	

Analysis Batch: 184934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	SM 2320B	
LCS 480-184934/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-184934/6	Method Blank	Total/NA	Water	SM 2320B	

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

General Chemistry (Continued)

Analysis Batch: 185294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	350.1	
LCS 480-185294/40	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-185294/64	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185294/39	Method Blank	Total/NA	Water	350.1	
MB 480-185294/63	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 185421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	300.0	
LCS 480-185421/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185421/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/42	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/41	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 185763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60766-1	MW-8-003-B-052914	Total/NA	Water	9060A	
LCS 480-185763/12	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-185763/4	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-185763/51	Lab Control Sample	Total/NA	Water	9060A	
MB 480-185763/11	Method Blank	Total/NA	Water	9060A	
MB 480-185763/3	Method Blank	Total/NA	Water	9060A	
MB 480-185763/50	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Client Sample ID: MW-8-003-B-052914

Lab Sample ID: 480-60766-1

Date Collected: 05/29/14 11:30

Matrix: Water

Date Received: 05/29/14 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	185707	06/05/14 03:52	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 14:39	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	184791	05/30/14 10:42	MAN	TAL BUF
Total/NA	Prep	3005A			184857	05/30/14 13:05	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185143	05/31/14 11:13	JRK	TAL BUF
Total/NA	Analysis	300.0		20	185421	06/03/14 18:19	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185294	06/02/14 20:17	RS	TAL BUF
Total/NA	Analysis	353.2		1	184756	05/30/14 00:18	KS	TAL BUF
Total/NA	Analysis	353.2		1	184757	05/30/14 00:18	KS	TAL BUF
Total/NA	Analysis	9060A		1	185763	06/03/14 03:30	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	184934	05/30/14 11:46	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 13:46	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60766-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60766-1	MW-8-003-B-052914	Water	05/29/14 11:30	05/29/14 17:15

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TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PIV: Deyo, Melissa L		Carrier Tracking No(s):		COC No: 480-49375-13138.4	
Client Contact: Mr. Tom Bohlen		E-Mail: melissa.deyo@testamericainc.com		Page: Page 4 of 4		Job #:	
Company: GZA GeoEnvironmental, Inc.		Due Date Requested: TAT Requested (days):		Analysis Requested		Preservation Codes:	
Address: 535 Washington Street 11th Floor		PO #: 4062165		9060 - Total Organic Carbon		A - HCL	
City: Buffalo		WO #: 58507		8260B - PCE, TCE, DCE (trans and cis), Vinyl Chi		M - Hexane	
State, Zip: NY, 14203		Project #: 48004014		6010B - Metals - Fe, Mn, Mg		N - None	
Phone:		SSOW#:		R3K_175_CO2 - Carbon dioxide		O - AshNaO2	
Email: thomas.bohlen@gza.com		Sample Date		352, 353, 2_Nitrite, Nitrate, Calc		P - Na2O4S	
Project Name: 058507, GM-Lockport Groundwater Sampling		Sample Time		SM4500_S2_D - Sulfide		Q - Na2SO3	
Site:		Sample Date		RSK_175 - Methane, Ethane, Ethene		R - Na2S2O3	
		Sample Type (C=Comp, G=grab)		2220B - Total Alkalinity		S - H2SO4	
		Matrix (W=Water, S=Solid, O=Swastool, BT=Tissue, A=Air)		300.0_28D - Anions (Chloride & Sulfate)		T - TSP Dodecylhydrate	
Sample Identification		MW-8-003-B-051914		350.1 - Ammonia		U - Acetone	
		5/29/14 1130		9690 - Total Organic Carbon		V - MCAA	
		Water		8260B - PCE, TCE, DCE (trans and cis), Vinyl Chi		W - ph 4-5	
		Water		6010B - Metals - Fe, Mn, Mg		X - other (specify)	
		Water		RSK_175_CO2 - Carbon dioxide		Z - other (specify)	
		Water		9060 - Total Organic Carbon		Other:	
		Water		8260B - PCE, TCE, DCE (trans and cis), Vinyl Chi		Special Instructions/Note:	
		Water		352, 353, 2_Nitrite, Nitrate, Calc			
		Water		300.0_28D - Anions (Chloride & Sulfate)		480-60766 Chain of Custody	
		Water		2220B - Total Alkalinity			
		Water		350.1 - Ammonia			
		Water		RSK_175 - Methane, Ethane, Ethene			
		Water		SM4500_S2_D - Sulfide			
		Water		9690 - Total Organic Carbon			
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		Water		350.1 - Ammonia			

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60766-1

Login Number: 60766

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	CRA
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60766-1

Login Number: 60766

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 05/31/14 03:17 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877558
Sample custody seals, if present, are intact.	N/A	
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	2.2°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60858-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/10/2014 6:41:44 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Job ID: 480-60858-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60858-1

Receipt

The sample was received on 5/30/2014 2:10 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-6-F-8-053014 (480-60858-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-6-F-8-053014 (480-60858-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Client Sample ID: MW-6-F-8-053014

Lab Sample ID: 480-60858-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Methane	12		4.0	1.0	ug/L	1			RSK-175	Total/NA
Iron	0.22		0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	359		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	0.69		0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	3840		25.0	14.1	mg/L	50			300.0	Total/NA
Sulfate	406		40.0	7.0	mg/L	20			300.0	Total/NA
Nitrate	0.16		0.050	0.020	mg/L	1			353.2	Total/NA
Total Organic Carbon	2.0		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	392		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	25000		1000	1000	ug/L	1			RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Client Sample ID: MW-6-F-8-053014

Lab Sample ID: 480-60858-1

Date Collected: 05/30/14 08:55

Matrix: Water

Date Received: 05/30/14 14:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/10/14 07:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/10/14 07:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/10/14 07:25	1
Trichloroethene	ND		1.0	0.46	ug/L			06/10/14 07:25	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/10/14 07:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		66 - 137		06/10/14 07:25	1
4-Bromofluorobenzene (Surr)	99		73 - 120		06/10/14 07:25	1
Toluene-d8 (Surr)	100		71 - 126		06/10/14 07:25	1
Dibromofluoromethane (Surr)	102		60 - 140		06/10/14 07:25	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/02/14 13:01	1
Ethene	ND		7.0	1.5	ug/L			06/02/14 13:01	1
Methane	12		4.0	1.0	ug/L			06/02/14 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	25000		1000	1000	ug/L			06/04/14 15:29	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.22		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 16:48	1
Magnesium	359		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 16:48	1
Manganese	0.69		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 16:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3840		25.0	14.1	mg/L			06/05/14 17:47	50
Sulfate	406		40.0	7.0	mg/L			06/04/14 00:34	20
Ammonia	ND		0.020	0.0090	mg/L			06/03/14 18:25	1
Nitrate	0.16		0.050	0.020	mg/L			05/30/14 20:45	1
Nitrite	ND		0.050	0.020	mg/L			05/30/14 20:45	1
Total Organic Carbon	2.0		1.0	0.43	mg/L			06/05/14 14:20	1
Total Alkalinity	392		5.0	0.79	mg/L			06/02/14 11:04	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:51	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-60858-1	MW-6-F-8-053014	102	99	100	102
LCS 480-186626/4	Lab Control Sample	100	102	101	101
MB 480-186626/8	Method Blank	100	98	100	100

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-186626/8

Matrix: Water

Analysis Batch: 186626

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/09/14 23:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/09/14 23:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/09/14 23:39	1
Trichloroethene	ND		1.0	0.46	ug/L			06/09/14 23:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/09/14 23:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		66 - 137		06/09/14 23:39	1
4-Bromofluorobenzene (Surr)	98		73 - 120		06/09/14 23:39	1
Toluene-d8 (Surr)	100		71 - 126		06/09/14 23:39	1
Dibromofluoromethane (Surr)	100		60 - 140		06/09/14 23:39	1

Lab Sample ID: LCS 480-186626/4

Matrix: Water

Analysis Batch: 186626

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	22.4		ug/L		90	74 - 124
Tetrachloroethene	25.0	23.0		ug/L		92	74 - 122
trans-1,2-Dichloroethene	25.0	23.0		ug/L		92	73 - 127
Trichloroethene	25.0	22.4		ug/L		90	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Toluene-d8 (Surr)	101		71 - 126
Dibromofluoromethane (Surr)	101		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-185084/3

Matrix: Water

Analysis Batch: 185084

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/02/14 08:31	1
Ethene	ND		7.0	1.5	ug/L			06/02/14 08:31	1
Methane	ND		4.0	1.0	ug/L			06/02/14 08:31	1

Lab Sample ID: LCS 480-185084/4

Matrix: Water

Analysis Batch: 185084

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.9		ug/L		102	52 - 138
Ethene	13.5	13.5		ug/L		101	50 - 137
Methane	7.69	7.75		ug/L		101	48 - 174

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-185084/5

Matrix: Water

Analysis Batch: 185084

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	14.2		ug/L		98	52 - 138	4	50
Ethene	13.5	12.8		ug/L		95	50 - 137	6	50
Methane	7.69	7.52		ug/L		98	48 - 174	3	50

Lab Sample ID: MB 200-73077/3

Matrix: Water

Analysis Batch: 73077

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:13	1

Lab Sample ID: LCS 200-73077/2

Matrix: Water

Analysis Batch: 73077

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5240		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-185098/1-A

Matrix: Water

Analysis Batch: 185827

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 185098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 15:36	1
Magnesium	ND		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 15:36	1
Manganese	ND		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 15:36	1

Lab Sample ID: LCS 480-185098/2-A

Matrix: Water

Analysis Batch: 185827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 185098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.95		mg/L		100	80 - 120
Magnesium	10.0	10.43		mg/L		104	80 - 120
Manganese	0.200	0.204		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185425/52

Matrix: Water

Analysis Batch: 185425

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/04/14 00:24	1
Sulfate	ND		2.0	0.35	mg/L			06/04/14 00:24	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-185425/51
Matrix: Water
Analysis Batch: 185425

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.53		mg/L		103	90 - 110
Sulfate	20.0	20.06		mg/L		100	90 - 110

Lab Sample ID: MB 480-185887/4
Matrix: Water
Analysis Batch: 185887

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/05/14 15:15	1
Sulfate	ND		2.0	0.35	mg/L			06/05/14 15:15	1

Lab Sample ID: LCS 480-185887/3
Matrix: Water
Analysis Batch: 185887

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.48		mg/L		97	90 - 110
Sulfate	20.0	19.60		mg/L		98	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185494/27
Matrix: Water
Analysis Batch: 185494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/03/14 18:02	1

Lab Sample ID: MB 480-185494/51
Matrix: Water
Analysis Batch: 185494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/03/14 18:23	1

Lab Sample ID: MB 480-185494/99
Matrix: Water
Analysis Batch: 185494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/03/14 19:05	1

Lab Sample ID: LCS 480-185494/100
Matrix: Water
Analysis Batch: 185494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-185494/28
 Matrix: Water
 Analysis Batch: 185494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Lab Sample ID: LCS 480-185494/52
 Matrix: Water
 Analysis Batch: 185494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-184998/3
 Matrix: Water
 Analysis Batch: 184998

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/30/14 20:39	1

Lab Sample ID: LCS 480-184998/4
 Matrix: Water
 Analysis Batch: 184998

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.51		mg/L		101	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186052/28
 Matrix: Water
 Analysis Batch: 186052

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/05/14 10:53	1

Lab Sample ID: LCS 480-186052/29
 Matrix: Water
 Analysis Batch: 186052

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	60.88		mg/L		101	90 - 110

Lab Sample ID: 480-60858-1 MS
 Matrix: Water
 Analysis Batch: 186052

Client Sample ID: MW-6-F-8-053014
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.0		20.0	12.92		mg/L		54	54 - 131

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-185231/30
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/02/14 13:10	1

Lab Sample ID: MB 480-185231/6
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/02/14 10:25	1

Lab Sample ID: LCS 480-185231/31
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.07		mg/L		95	90 - 110

Lab Sample ID: LCS 480-185231/7
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.34		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/41
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:27	1

Lab Sample ID: LCS 480-185455/42
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.719		mg/L		96	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

GC/MS VOA

Analysis Batch: 186626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	8260C	
LCS 480-186626/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186626/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	RSK-175	
LCS 200-73077/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73077/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 185084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	RSK-175	
LCS 480-185084/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-185084/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-185084/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 185098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	3005A	
LCS 480-185098/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-185098/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	6010C	185098
LCS 480-185098/2-A	Lab Control Sample	Total/NA	Water	6010C	185098
MB 480-185098/1-A	Method Blank	Total/NA	Water	6010C	185098

General Chemistry

Analysis Batch: 184998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	353.2	
LCS 480-184998/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-184998/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 184999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	353.2	

Analysis Batch: 185231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	SM 2320B	
LCS 480-185231/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-185231/7	Lab Control Sample	Total/NA	Water	SM 2320B	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

General Chemistry (Continued)

Analysis Batch: 185231 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-185231/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-185231/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	300.0	
LCS 480-185425/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185425/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/42	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/41	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 185494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	350.1	
LCS 480-185494/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-185494/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-185494/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185494/27	Method Blank	Total/NA	Water	350.1	
MB 480-185494/51	Method Blank	Total/NA	Water	350.1	
MB 480-185494/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 185887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	300.0	
LCS 480-185887/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185887/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 186052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60858-1	MW-6-F-8-053014	Total/NA	Water	9060A	
480-60858-1 MS	MW-6-F-8-053014	Total/NA	Water	9060A	
LCS 480-186052/29	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186052/28	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Client Sample ID: MW-6-F-8-053014

Lab Sample ID: 480-60858-1

Date Collected: 05/30/14 08:55

Matrix: Water

Date Received: 05/30/14 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	186626	06/10/14 07:25	CXM	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 15:29	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	185084	06/02/14 13:01	MAN	TAL BUF
Total/NA	Prep	3005A			185098	06/03/14 09:05	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185827	06/04/14 16:48	JRK	TAL BUF
Total/NA	Analysis	300.0		20	185425	06/04/14 00:34	KRC	TAL BUF
Total/NA	Analysis	300.0		50	185887	06/05/14 17:47	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185494	06/03/14 18:25	RS	TAL BUF
Total/NA	Analysis	353.2		1	184999	05/30/14 20:45	KS	TAL BUF
Total/NA	Analysis	353.2		1	184998	05/30/14 20:45	KS	TAL BUF
Total/NA	Analysis	9060A		1	186052	06/05/14 14:20	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	185231	06/02/14 11:04	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 13:51	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60858-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60858-1	MW-6-F-8-053014	Water	05/30/14 08:55	05/30/14 14:10

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Chain of Custody Record

Client Information		Lab PIV: Deyo, Melissa L		Carrier Tracking No(s):	
Client Contact: Mr. Tom Bohlen		E-Mail: melissa.deyo@testamericainc.com		COC No: 480-49375-13138.4	
Company: GZA GeoEnvironmental, Inc.		Phone: 716 695-2300		Page: 4 of 4	
Address: 535 Washington Street 11th Floor		City: Buffalo		Job #:	
State, Zip: NY, 14203		PO #: 4062165		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - NaHSO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify) Other:	
Email: tbohlen@gza.com		WO #: 58507		Total Number of Containers:	
Project #: 058507, GM-Lockport Groundwater Sampling		Project #: 48004014		Special Instructions/Note:	
Site:		SSOW#:		480-60858 Chain of Custody	
Sample Identification		Sample Date		Sample Time	
MW-6-F-8-053014		5/30/14		855 G	
Matrix (Water, Solid, Swab, On-wet, BT-Tissue, A-Air)		Sample Type (C=comp, G=grab)		Matrix	
Water		G		Water	
Water				Water	
Water				Water	
Water				Water	
Water				Water	
Water				Water	
Possible Hazard Identification		Sample Date		Sample Time	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: Thomas Bohlen		Date: 5/30/14		Date: 5/30/14	
Relinquished by:		Date:		Date:	
Relinquished by:		Date:		Date:	
Custody/Seals Intact: A		Custody Seal No:		Cooler Temperature(s) °C and Other Remarks:	
A Yes A No				# 2 3.6	



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60858-1

Login Number: 60858

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60858-1

Login Number: 60858

List Number: 2

Creator: Gagne, Eric M

List Source: TestAmerica Burlington

List Creation: 06/03/14 11:41 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877571
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4°C. IR GUN ID 181. CF = 0
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	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	No sample time on container labels.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60859-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/12/2014 11:13:51 AM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Job ID: 480-60859-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60859-1

Comments

No additional comments.

Receipt

The sample was received on 5/30/2014 2:10 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6° C.

GC/MS VOA

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-A-6-053014 (480-60859-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following analytes trans-1,2-Dichloroethene and Vinyl Chloride were detected in the sample at a concentration above the linear range of the initial calibration curve. Due to the high dilution dictated by other target compounds, these analytes were diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-A-6-053014 (480-60859-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

Method(s) RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-7-A-6-053014 (480-60859-1). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Client Sample ID: MW-7-A-6-053014

Lab Sample ID: 480-60859-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	110	E	1.0	0.90	ug/L	1		8260C	Total/NA
Vinyl chloride	1500	E	1.0	0.90	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene - DL	29000		5000	4100	ug/L	5000		8260C	Total/NA
Tetrachloroethene - DL	130000		5000	1800	ug/L	5000		8260C	Total/NA
Trichloroethene - DL	23000		5000	2300	ug/L	5000		8260C	Total/NA
Ethane	28		7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	230		7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	800		400	100	ug/L	100		RSK-175	Total/NA
Iron	0.35		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	97.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.88		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	625		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	62.8		2.0	0.35	mg/L	1		300.0	Total/NA
Ammonia	0.055		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	9.7		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	481		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	27000		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Client Sample ID: MW-7-A-6-053014

Lab Sample ID: 480-60859-1

Date Collected: 05/30/14 11:30

Matrix: Water

Date Received: 05/30/14 14:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	110	E	1.0	0.90	ug/L			06/10/14 02:29	1
Vinyl chloride	1500	E	1.0	0.90	ug/L			06/10/14 02:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		66 - 137					06/10/14 02:29	1
4-Bromofluorobenzene (Surr)	92		73 - 120					06/10/14 02:29	1
Toluene-d8 (Surr)	116		71 - 126					06/10/14 02:29	1
Dibromofluoromethane (Surr)	101		60 - 140					06/10/14 02:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	29000		5000	4100	ug/L			06/10/14 19:11	5000
Tetrachloroethene	130000		5000	1800	ug/L			06/10/14 19:11	5000
Trichloroethene	23000		5000	2300	ug/L			06/10/14 19:11	5000
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		66 - 137					06/10/14 19:11	5000
4-Bromofluorobenzene (Surr)	112		73 - 120					06/10/14 19:11	5000
Toluene-d8 (Surr)	107		71 - 126					06/10/14 19:11	5000
Dibromofluoromethane (Surr)	117		60 - 140					06/10/14 19:11	5000

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	28		7.5	1.5	ug/L			06/02/14 14:04	1
Ethene	230		7.0	1.5	ug/L			06/02/14 14:04	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	27000		1000	1000	ug/L			06/04/14 15:37	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	800		400	100	ug/L			06/02/14 15:17	100

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.35		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 16:51	1
Magnesium	97.7		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 16:51	1
Manganese	0.88		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	625		5.0	2.8	mg/L			06/06/14 16:36	10
Sulfate	62.8		2.0	0.35	mg/L			06/03/14 08:47	1
Ammonia	0.055		0.020	0.0090	mg/L			06/03/14 18:26	1
Nitrate	ND		0.050	0.020	mg/L			05/30/14 18:25	1
Nitrite	ND		0.050	0.020	mg/L			05/30/14 18:25	1
Total Organic Carbon	9.7		1.0	0.43	mg/L			06/05/14 16:10	1
Total Alkalinity	481		5.0	0.79	mg/L			06/02/14 11:18	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 14:00	1

TestAmerica Buffalo

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-60859-1	MW-7-A-6-053014	101	92	116	101
480-60859-1 - DL	MW-7-A-6-053014	113	112	107	117
LCS 480-186623/29	Lab Control Sample	105	106	105	106
LCS 480-186722/6	Lab Control Sample	109	108	107	110
MB 480-186623/6	Method Blank	112	112	107	114
MB 480-186722/7	Method Blank	111	111	107	113

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-186623/6

Matrix: Water

Analysis Batch: 186623

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/09/14 22:55	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/09/14 22:55	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/09/14 22:55	1
Trichloroethene	ND		1.0	0.46	ug/L			06/09/14 22:55	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/09/14 22:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		66 - 137		06/09/14 22:55	1
4-Bromofluorobenzene (Surr)	112		73 - 120		06/09/14 22:55	1
Toluene-d8 (Surr)	107		71 - 126		06/09/14 22:55	1
Dibromofluoromethane (Surr)	114		60 - 140		06/09/14 22:55	1

Lab Sample ID: LCS 480-186623/29

Matrix: Water

Analysis Batch: 186623

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.9		ug/L		104	74 - 124
Tetrachloroethene	25.0	27.3		ug/L		109	74 - 122
trans-1,2-Dichloroethene	25.0	25.9		ug/L		104	73 - 127
Trichloroethene	25.0	26.5		ug/L		106	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		66 - 137
4-Bromofluorobenzene (Surr)	106		73 - 120
Toluene-d8 (Surr)	105		71 - 126
Dibromofluoromethane (Surr)	106		60 - 140

Lab Sample ID: MB 480-186722/7

Matrix: Water

Analysis Batch: 186722

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/10/14 11:51	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/10/14 11:51	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/10/14 11:51	1
Trichloroethene	ND		1.0	0.46	ug/L			06/10/14 11:51	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/10/14 11:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		66 - 137		06/10/14 11:51	1
4-Bromofluorobenzene (Surr)	111		73 - 120		06/10/14 11:51	1
Toluene-d8 (Surr)	107		71 - 126		06/10/14 11:51	1
Dibromofluoromethane (Surr)	113		60 - 140		06/10/14 11:51	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-186722/6

Matrix: Water

Analysis Batch: 186722

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	24.9		ug/L		99	74 - 124
Tetrachloroethene	25.0	24.6		ug/L		99	74 - 122
trans-1,2-Dichloroethene	25.0	24.4		ug/L		98	73 - 127
Trichloroethene	25.0	24.6		ug/L		98	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		66 - 137
4-Bromofluorobenzene (Surr)	108		73 - 120
Toluene-d8 (Surr)	107		71 - 126
Dibromofluoromethane (Surr)	110		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-185084/3

Matrix: Water

Analysis Batch: 185084

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/02/14 08:31	1
Ethene	ND		7.0	1.5	ug/L			06/02/14 08:31	1
Methane	ND		4.0	1.0	ug/L			06/02/14 08:31	1

Lab Sample ID: LCS 480-185084/4

Matrix: Water

Analysis Batch: 185084

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.9		ug/L		102	52 - 138
Ethene	13.5	13.5		ug/L		101	50 - 137
Methane	7.69	7.75		ug/L		101	48 - 174

Lab Sample ID: LCSD 480-185084/5

Matrix: Water

Analysis Batch: 185084

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	14.2		ug/L		98	52 - 138	4	50
Ethene	13.5	12.8		ug/L		95	50 - 137	6	50
Methane	7.69	7.52		ug/L		98	48 - 174	3	50

Lab Sample ID: MB 200-73077/3

Matrix: Water

Analysis Batch: 73077

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/04/14 14:13	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 200-73077/2
 Matrix: Water
 Analysis Batch: 73077

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5240		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-185098/1-A
 Matrix: Water
 Analysis Batch: 185827

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 185098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 15:36	1
Magnesium	ND		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 15:36	1
Manganese	ND		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 15:36	1

Lab Sample ID: LCS 480-185098/2-A
 Matrix: Water
 Analysis Batch: 185827

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 185098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.95		mg/L		100	80 - 120
Magnesium	10.0	10.43		mg/L		104	80 - 120
Manganese	0.200	0.204		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185215/76
 Matrix: Water
 Analysis Batch: 185215

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/03/14 07:36	1
Sulfate	ND		2.0	0.35	mg/L			06/03/14 07:36	1

Lab Sample ID: LCS 480-185215/75
 Matrix: Water
 Analysis Batch: 185215

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	18.79		mg/L		94	90 - 110
Sulfate	20.0	18.49		mg/L		92	90 - 110

Lab Sample ID: 480-60859-1 MS
 Matrix: Water
 Analysis Batch: 185215

Client Sample ID: MW-7-A-6-053014
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	62.8		25.0	86.71		mg/L		96	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-186174/4
 Matrix: Water
 Analysis Batch: 186174

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/06/14 16:26	1
Sulfate	ND		2.0	0.35	mg/L			06/06/14 16:26	1

Lab Sample ID: LCS 480-186174/3
 Matrix: Water
 Analysis Batch: 186174

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	21.57		mg/L		108	90 - 110
Sulfate	20.0	22.20	*	mg/L		111	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185494/27
 Matrix: Water
 Analysis Batch: 185494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/03/14 18:02	1

Lab Sample ID: MB 480-185494/51
 Matrix: Water
 Analysis Batch: 185494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/03/14 18:23	1

Lab Sample ID: LCS 480-185494/28
 Matrix: Water
 Analysis Batch: 185494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Lab Sample ID: LCS 480-185494/52
 Matrix: Water
 Analysis Batch: 185494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186052/28
 Matrix: Water
 Analysis Batch: 186052

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/05/14 10:53	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-186052/29
 Matrix: Water
 Analysis Batch: 186052

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	60.88		mg/L		101	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-185231/30
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/02/14 13:10	1

Lab Sample ID: MB 480-185231/6
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/02/14 10:25	1

Lab Sample ID: LCS 480-185231/31
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.07		mg/L		95	90 - 110

Lab Sample ID: LCS 480-185231/7
 Matrix: Water
 Analysis Batch: 185231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	95.34		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/41
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:27	1

Lab Sample ID: LCS 480-185455/42
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.719		mg/L		96	90 - 110

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

GC/MS VOA

Analysis Batch: 186623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	8260C	
LCS 480-186623/29	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186623/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 186722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1 - DL	MW-7-A-6-053014	Total/NA	Water	8260C	
LCS 480-186722/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186722/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	RSK-175	
LCS 200-73077/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73077/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 185084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	RSK-175	
480-60859-1 - DL	MW-7-A-6-053014	Total/NA	Water	RSK-175	
LCS 480-185084/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS D 480-185084/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-185084/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 185098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	3005A	
LCS 480-185098/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-185098/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	6010C	185098
LCS 480-185098/2-A	Lab Control Sample	Total/NA	Water	6010C	185098
MB 480-185098/1-A	Method Blank	Total/NA	Water	6010C	185098

General Chemistry

Analysis Batch: 184999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	353.2	

Analysis Batch: 185000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

General Chemistry (Continued)

Analysis Batch: 185215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	300.0	
480-60859-1 MS	MW-7-A-6-053014	Total/NA	Water	300.0	
LCS 480-185215/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185215/76	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	SM 2320B	
LCS 480-185231/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-185231/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-185231/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-185231/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/42	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/41	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 185494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	350.1	
LCS 480-185494/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-185494/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185494/27	Method Blank	Total/NA	Water	350.1	
MB 480-185494/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 186052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	9060A	
LCS 480-186052/29	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186052/28	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 186174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60859-1	MW-7-A-6-053014	Total/NA	Water	300.0	
LCS 480-186174/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-186174/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Client Sample ID: MW-7-A-6-053014

Lab Sample ID: 480-60859-1

Date Collected: 05/30/14 11:30

Matrix: Water

Date Received: 05/30/14 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	186623	06/10/14 02:29	NQN	TAL BUF
Total/NA	Analysis	8260C	DL	5000	186722	06/10/14 19:11	CDC	TAL BUF
Total/NA	Analysis	RSK-175		1	73077	06/04/14 15:37	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	185084	06/02/14 14:04	MAN	TAL BUF
Total/NA	Analysis	RSK-175	DL	100	185084	06/02/14 15:17	MAN	TAL BUF
Total/NA	Prep	3005A			185098	06/03/14 09:05	EHD	TAL BUF
Total/NA	Analysis	6010C		1	185827	06/04/14 16:51	JRK	TAL BUF
Total/NA	Analysis	300.0		10	186174	06/06/14 16:36	KRC	TAL BUF
Total/NA	Analysis	300.0		1	185215	06/03/14 08:47	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185494	06/03/14 18:26	RS	TAL BUF
Total/NA	Analysis	353.2		1	184999	05/30/14 18:25	KS	TAL BUF
Total/NA	Analysis	353.2		1	185000	05/30/14 18:25	KS	TAL BUF
Total/NA	Analysis	9060A		1	186052	06/05/14 16:10	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	185231	06/02/14 11:18	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 14:00	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60859-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60859-1	MW-7-A-6-053014	Water	05/30/14 11:30	05/30/14 14:10

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Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60859-1

Login Number: 60859

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60859-1

Login Number: 60859

List Number: 2

Creator: Gagne, Eric M

List Source: TestAmerica Burlington

List Creation: 06/03/14 11:46 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877571
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4°C. IR GUN ID 181. CF = 0
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	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	No sample times listed on container labels.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60961-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/13/2014 4:18:26 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Job ID: 480-60961-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60961-1

Receipt

The sample was received on 6/2/2014 4:50 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-8-4-060214 (480-60961-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-8-4-060214 (480-60961-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

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



Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Client Sample ID: MW-8-4-060214

Lab Sample ID: 480-60961-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	17		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	5.4		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	3.4		1.0	0.90	ug/L	1		8260C	Total/NA
Methane	140		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	3.1		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	121		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.0		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	4160		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	455		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.18		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	2.9		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	175		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	4200		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Client Sample ID: MW-8-4-060214

Lab Sample ID: 480-60961-1

Date Collected: 06/02/14 11:35

Matrix: Water

Date Received: 06/02/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	17		1.0	0.81	ug/L			06/03/14 05:26	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/03/14 05:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/03/14 05:26	1
Trichloroethene	5.4		1.0	0.46	ug/L			06/03/14 05:26	1
Vinyl chloride	3.4		1.0	0.90	ug/L			06/03/14 05:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		66 - 137		06/03/14 05:26	1
4-Bromofluorobenzene (Surr)	99		73 - 120		06/03/14 05:26	1
Toluene-d8 (Surr)	103		71 - 126		06/03/14 05:26	1
Dibromofluoromethane (Surr)	108		60 - 140		06/03/14 05:26	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/03/14 09:01	1
Ethene	ND		7.0	1.5	ug/L			06/03/14 09:01	1
Methane	140		4.0	1.0	ug/L			06/03/14 09:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	4200		1000	1000	ug/L			06/10/14 13:46	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	3.1		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 13:43	1
Magnesium	121		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 13:43	1
Manganese	1.0		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4160		25.0	14.1	mg/L			06/05/14 23:42	50
Sulfate	455		100	17.5	mg/L			06/12/14 13:27	50
Ammonia	0.18		0.020	0.0090	mg/L			06/05/14 15:54	1
Nitrate	ND		0.050	0.020	mg/L			06/03/14 16:48	1
Nitrite	ND		0.050	0.020	mg/L			06/03/14 16:48	1
Total Organic Carbon	2.9		1.0	0.43	mg/L			06/09/14 18:08	1
Total Alkalinity	175		5.0	0.79	mg/L			06/04/14 10:47	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 14:22	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60961-1	MW-8-4-060214	116	99	103	108
LCS 480-185264/6	Lab Control Sample	114	105	106	114
LCSD 480-185264/7	Lab Control Sample Dup	114	106	105	112
MB 480-185264/9	Method Blank	120	98	100	114

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-185264/9

Matrix: Water

Analysis Batch: 185264

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/03/14 01:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/03/14 01:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/03/14 01:52	1
Trichloroethene	ND		1.0	0.46	ug/L			06/03/14 01:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/03/14 01:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		66 - 137		06/03/14 01:52	1
4-Bromofluorobenzene (Surr)	98		73 - 120		06/03/14 01:52	1
Toluene-d8 (Surr)	100		71 - 126		06/03/14 01:52	1
Dibromofluoromethane (Surr)	114		60 - 140		06/03/14 01:52	1

Lab Sample ID: LCS 480-185264/6

Matrix: Water

Analysis Batch: 185264

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	26.9		ug/L		107	74 - 124
Tetrachloroethene	25.0	26.6		ug/L		106	74 - 122
trans-1,2-Dichloroethene	25.0	27.8		ug/L		111	73 - 127
Trichloroethene	25.0	27.2		ug/L		109	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	106		71 - 126
Dibromofluoromethane (Surr)	114		60 - 140

Lab Sample ID: LCSD 480-185264/7

Matrix: Water

Analysis Batch: 185264

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	25.0	26.1		ug/L		104	74 - 124	3	15
Tetrachloroethene	25.0	25.2		ug/L		101	74 - 122	5	20
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	73 - 127	3	20
Trichloroethene	25.0	26.6		ug/L		106	74 - 123	3	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
4-Bromofluorobenzene (Surr)	106		73 - 120
Toluene-d8 (Surr)	105		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-185320/3
 Matrix: Water
 Analysis Batch: 185320

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/03/14 07:57	1
Ethene	ND		7.0	1.5	ug/L			06/03/14 07:57	1
Methane	ND		4.0	1.0	ug/L			06/03/14 07:57	1

Lab Sample ID: LCS 480-185320/4
 Matrix: Water
 Analysis Batch: 185320

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.5		ug/L		99	52 - 138
Ethene	13.5	13.0		ug/L		97	50 - 137
Methane	7.69	7.60		ug/L		99	48 - 174

Lab Sample ID: LCSD 480-185320/5
 Matrix: Water
 Analysis Batch: 185320

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	13.1		ug/L		90	52 - 138	10	50
Ethene	13.5	11.9		ug/L		89	50 - 137	9	50
Methane	7.69	6.80		ug/L		88	48 - 174	11	50

Lab Sample ID: MB 200-73327/3
 Matrix: Water
 Analysis Batch: 73327

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/10/14 13:35	1

Lab Sample ID: LCS 200-73327/2
 Matrix: Water
 Analysis Batch: 73327

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5260		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-185333/1-A
 Matrix: Water
 Analysis Batch: 185788

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 185333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 12:54	1
Magnesium	ND		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 12:54	1
Manganese	ND		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 12:54	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-185333/2-A

Matrix: Water

Analysis Batch: 185788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 185333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.15		mg/L		102	80 - 120
Magnesium	10.0	10.62		mg/L		106	80 - 120
Manganese	0.200	0.212		mg/L		106	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185892/52

Matrix: Water

Analysis Batch: 185892

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/05/14 23:22	1
Sulfate	ND	^	2.0	0.35	mg/L			06/05/14 23:22	1

Lab Sample ID: LCS 480-185892/51

Matrix: Water

Analysis Batch: 185892

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.67		mg/L		98	90 - 110
Sulfate	20.0	22.73	^ *	mg/L		114	90 - 110

Lab Sample ID: MB 480-187300/4

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/12/14 12:57	1
Sulfate	ND		2.0	0.35	mg/L			06/12/14 12:57	1

Lab Sample ID: LCS 480-187300/3

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.79		mg/L		99	90 - 110
Sulfate	20.0	21.18		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185980/27

Matrix: Water

Analysis Batch: 185980

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/05/14 15:47	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-185980/3
 Matrix: Water
 Analysis Batch: 185980

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/05/14 15:27	1

Lab Sample ID: LCS 480-185980/28
 Matrix: Water
 Analysis Batch: 185980

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Lab Sample ID: LCS 480-185980/4
 Matrix: Water
 Analysis Batch: 185980

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186946/12
 Matrix: Water
 Analysis Batch: 186946

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/09/14 17:12	1

Lab Sample ID: LCS 480-186946/13
 Matrix: Water
 Analysis Batch: 186946

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	61.95		mg/L		103	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-185691/6
 Matrix: Water
 Analysis Batch: 185691

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/04/14 10:35	1

Lab Sample ID: LCS 480-185691/7
 Matrix: Water
 Analysis Batch: 185691

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.91		mg/L		95	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 480-60961-1 DU
 Matrix: Water
 Analysis Batch: 185691

Client Sample ID: MW-8-4-060214
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Alkalinity	175		176.4		mg/L		0.5	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/41
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:27	1

Lab Sample ID: LCS 480-185455/42
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.719		mg/L		96	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

GC/MS VOA

Analysis Batch: 185264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	8260C	
LCS 480-185264/6	Lab Control Sample	Total/NA	Water	8260C	
LCS 480-185264/7	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-185264/9	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	RSK-175	
LCS 200-73327/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73327/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 185320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	RSK-175	
LCS 480-185320/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-185320/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-185320/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 185333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	3005A	
LCS 480-185333/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-185333/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	6010C	185333
LCS 480-185333/2-A	Lab Control Sample	Total/NA	Water	6010C	185333
MB 480-185333/1-A	Method Blank	Total/NA	Water	6010C	185333

General Chemistry

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/42	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/41	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 185507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	353.2	

Analysis Batch: 185508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

General Chemistry (Continued)

Analysis Batch: 185691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	SM 2320B	
480-60961-1 DU	MW-8-4-060214	Total/NA	Water	SM 2320B	
LCS 480-185691/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-185691/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	300.0	
LCS 480-185892/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185892/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	350.1	
LCS 480-185980/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-185980/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185980/27	Method Blank	Total/NA	Water	350.1	
MB 480-185980/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 186946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	9060A	
LCS 480-186946/13	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186946/12	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 187300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60961-1	MW-8-4-060214	Total/NA	Water	300.0	
LCS 480-187300/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-187300/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Client Sample ID: MW-8-4-060214

Lab Sample ID: 480-60961-1

Date Collected: 06/02/14 11:35

Matrix: Water

Date Received: 06/02/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	185264	06/03/14 05:26	CXM	TAL BUF
Total/NA	Analysis	RSK-175		1	73327	06/10/14 13:46	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	185320	06/03/14 09:01	MAN	TAL BUF
Total/NA	Prep	3005A			185333	06/03/14 09:05	SS1	TAL BUF
Total/NA	Analysis	6010C		1	185788	06/04/14 13:43	MTM2	TAL BUF
Total/NA	Analysis	300.0		50	185892	06/05/14 23:42	KRC	TAL BUF
Total/NA	Analysis	300.0		50	187300	06/12/14 13:27	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185980	06/05/14 15:54	RS	TAL BUF
Total/NA	Analysis	353.2		1	185507	06/03/14 16:48	CLT	TAL BUF
Total/NA	Analysis	353.2		1	185508	06/03/14 16:48	CLT	TAL BUF
Total/NA	Analysis	9060A		1	186946	06/09/14 18:08	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	185691	06/04/14 10:47	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 14:22	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60961-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60961-1	MW-8-4-060214	Water	06/02/14 11:35	06/02/14 16:50

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Chain of Custody Record

Client Information Client Contact: Mr. Tom Bohlen Company: GZA GeoEnvironmental, Inc. Address: 535 Washington Street, 11th Floor City: Buffalo State, Zip: NY, 14203 Phone: 4062165 Email: thomas.bohlen@gza.com Project Name: 058507, GM-Lockport Groundwater Sampling Site:		Lab PIV: Devo, Melissa L E-Mail: melissa.devo@testamericainc.com Carrier Tracking No(s): COC No: 480-49375-13138.4 Page: Page 4 of 4 Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SOW#:	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No)	RSK_175_CO2 - Carbon dioxide 350.1 - Ammonia 6010B - Metals - Fe, Mn, Mg 8260B - PCE, TCE, DCE (trans and cis), Vinyl Chloride 9060 - Total Organic Carbon RSK_175 - Methane, Ethane, Ethene SM4500_S2_D - Sulfide 353.2, 353.2_Nitrite, Nitrate, Calc 2220B - Total Alkalinity 300.0_28D - Anions (Chloride & Sulfate)	Analysis Requested Total Number of Containers
Sample Identification MW-8-4-060214	Sample Date 6/11/14	Sample Time 1135 G	Sample Type (C=Comp, G=grab) Matrix (W=Water, S=Soil, O=Organic, T=Tissue, A=Air) Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - NaHSO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - ph 4.5 Z - other (specify)
Special Instructions/Note: 480-60961 Chain of Custody		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	
Relinquished by: <i>Thomas Bohlen</i>		Date/Time: 6/11/14 1650	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody/Seals Intact:		Cooler Temperature(s) °C and Other Remarks:	
Custody Seal No.		No #	



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60961-1

Login Number: 60961

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60961-1

Login Number: 60961

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 06/05/14 03:32 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	251290
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60962-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/16/2014 3:41:52 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Qualifiers

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.

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Job ID: 480-60962-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60962-1

Receipt

The sample was received on 6/2/2014 4:50 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: TK-6-060214 (480-60962-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: TK-6-060214 (480-60962-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

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



Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Client Sample ID: TK-6-060214

Lab Sample ID: 480-60962-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Iron	0.025	J	0.050	0.019	mg/L	1			6010C	Total/NA
Magnesium	45.0		0.20	0.043	mg/L	1			6010C	Total/NA
Manganese	0.0019	J	0.0030	0.00040	mg/L	1			6010C	Total/NA
Chloride	949		10.0	5.6	mg/L	20			300.0	Total/NA
Sulfate	212		40.0	7.0	mg/L	20			300.0	Total/NA
Nitrate	0.75		0.050	0.020	mg/L	1			353.2	Total/NA
Total Organic Carbon	1.4		1.0	0.43	mg/L	1			9060A	Total/NA
Total Alkalinity	365		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Carbon dioxide	6700		1000	1000	ug/L	1			RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Client Sample ID: TK-6-060214

Lab Sample ID: 480-60962-1

Date Collected: 06/02/14 16:00

Matrix: Water

Date Received: 06/02/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/03/14 05:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/03/14 05:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/03/14 05:49	1
Trichloroethene	ND		1.0	0.46	ug/L			06/03/14 05:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/03/14 05:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		66 - 137		06/03/14 05:49	1
4-Bromofluorobenzene (Surr)	96		73 - 120		06/03/14 05:49	1
Toluene-d8 (Surr)	99		71 - 126		06/03/14 05:49	1
Dibromofluoromethane (Surr)	110		60 - 140		06/03/14 05:49	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/03/14 09:18	1
Ethene	ND		7.0	1.5	ug/L			06/03/14 09:18	1
Methane	ND		4.0	1.0	ug/L			06/03/14 09:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	6700		1000	1000	ug/L			06/10/14 13:54	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.025	J	0.050	0.019	mg/L		06/03/14 09:05	06/04/14 13:46	1
Magnesium	45.0		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 13:46	1
Manganese	0.0019	J	0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	949		10.0	5.6	mg/L			06/05/14 23:52	20
Sulfate	212		40.0	7.0	mg/L			06/12/14 13:37	20
Ammonia	ND		0.020	0.0090	mg/L			06/10/14 18:00	1
Nitrate	0.75		0.050	0.020	mg/L			06/03/14 17:36	1
Nitrite	ND		0.050	0.020	mg/L			06/03/14 17:36	1
Total Organic Carbon	1.4		1.0	0.43	mg/L			06/09/14 18:36	1
Total Alkalinity	365		5.0	0.79	mg/L			06/04/14 11:01	1
Sulfide	ND		0.10	0.052	mg/L			06/03/14 14:24	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-60962-1	TK-6-060214	118	96	99	110
LCS 480-185264/6	Lab Control Sample	114	105	106	114
LCSD 480-185264/7	Lab Control Sample Dup	114	106	105	112
MB 480-185264/9	Method Blank	120	98	100	114

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-185264/9

Matrix: Water

Analysis Batch: 185264

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/03/14 01:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/03/14 01:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/03/14 01:52	1
Trichloroethene	ND		1.0	0.46	ug/L			06/03/14 01:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/03/14 01:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		66 - 137		06/03/14 01:52	1
4-Bromofluorobenzene (Surr)	98		73 - 120		06/03/14 01:52	1
Toluene-d8 (Surr)	100		71 - 126		06/03/14 01:52	1
Dibromofluoromethane (Surr)	114		60 - 140		06/03/14 01:52	1

Lab Sample ID: LCS 480-185264/6

Matrix: Water

Analysis Batch: 185264

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	26.9		ug/L		107	74 - 124
Tetrachloroethene	25.0	26.6		ug/L		106	74 - 122
trans-1,2-Dichloroethene	25.0	27.8		ug/L		111	73 - 127
Trichloroethene	25.0	27.2		ug/L		109	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	106		71 - 126
Dibromofluoromethane (Surr)	114		60 - 140

Lab Sample ID: LCSD 480-185264/7

Matrix: Water

Analysis Batch: 185264

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	25.0	26.1		ug/L		104	74 - 124	3	15
Tetrachloroethene	25.0	25.2		ug/L		101	74 - 122	5	20
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	73 - 127	3	20
Trichloroethene	25.0	26.6		ug/L		106	74 - 123	3	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
4-Bromofluorobenzene (Surr)	106		73 - 120
Toluene-d8 (Surr)	105		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-185320/3
Matrix: Water
Analysis Batch: 185320

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/03/14 07:57	1
Ethene	ND		7.0	1.5	ug/L			06/03/14 07:57	1
Methane	ND		4.0	1.0	ug/L			06/03/14 07:57	1

Lab Sample ID: LCS 480-185320/4
Matrix: Water
Analysis Batch: 185320

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.5		ug/L		99	52 - 138
Ethene	13.5	13.0		ug/L		97	50 - 137
Methane	7.69	7.60		ug/L		99	48 - 174

Lab Sample ID: LCSD 480-185320/5
Matrix: Water
Analysis Batch: 185320

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	13.1		ug/L		90	52 - 138	10	50
Ethene	13.5	11.9		ug/L		89	50 - 137	9	50
Methane	7.69	6.80		ug/L		88	48 - 174	11	50

Lab Sample ID: MB 200-73327/3
Matrix: Water
Analysis Batch: 73327

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/10/14 13:35	1

Lab Sample ID: LCS 200-73327/2
Matrix: Water
Analysis Batch: 73327

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5260		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-185333/1-A
Matrix: Water
Analysis Batch: 185788

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		06/03/14 09:05	06/04/14 12:54	1
Magnesium	ND		0.20	0.043	mg/L		06/03/14 09:05	06/04/14 12:54	1
Manganese	ND		0.0030	0.00040	mg/L		06/03/14 09:05	06/04/14 12:54	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-185333/2-A

Matrix: Water

Analysis Batch: 185788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 185333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.15		mg/L		102	80 - 120
Magnesium	10.0	10.62		mg/L		106	80 - 120
Manganese	0.200	0.212		mg/L		106	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185892/52

Matrix: Water

Analysis Batch: 185892

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/05/14 23:22	1
Sulfate	ND	^	2.0	0.35	mg/L			06/05/14 23:22	1

Lab Sample ID: LCS 480-185892/51

Matrix: Water

Analysis Batch: 185892

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.67		mg/L		98	90 - 110
Sulfate	20.0	22.73	^ *	mg/L		114	90 - 110

Lab Sample ID: MB 480-187300/4

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/12/14 12:57	1
Sulfate	ND		2.0	0.35	mg/L			06/12/14 12:57	1

Lab Sample ID: LCS 480-187300/3

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.79		mg/L		99	90 - 110
Sulfate	20.0	21.18		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185984/27

Matrix: Water

Analysis Batch: 185984

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/05/14 17:36	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-185984/28
 Matrix: Water
 Analysis Batch: 185984

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Lab Sample ID: MB 480-186884/3
 Matrix: Water
 Analysis Batch: 186884

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/10/14 17:56	1

Lab Sample ID: LCS 480-186884/4
 Matrix: Water
 Analysis Batch: 186884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-185484/3
 Matrix: Water
 Analysis Batch: 185484

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			06/03/14 17:34	1

Lab Sample ID: LCS 480-185484/4
 Matrix: Water
 Analysis Batch: 185484

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.52		mg/L		101	90 - 110

Lab Sample ID: 480-60962-1 MS
 Matrix: Water
 Analysis Batch: 185484

Client Sample ID: TK-6-060214
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	1.02		mg/L		102	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186946/12
 Matrix: Water
 Analysis Batch: 186946

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/09/14 17:12	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-186946/13
 Matrix: Water
 Analysis Batch: 186946

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	61.95		mg/L		103	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-185691/6
 Matrix: Water
 Analysis Batch: 185691

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/04/14 10:35	1

Lab Sample ID: LCS 480-185691/7
 Matrix: Water
 Analysis Batch: 185691

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.91		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-185455/41
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/03/14 13:27	1

Lab Sample ID: LCS 480-185455/42
 Matrix: Water
 Analysis Batch: 185455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.719		mg/L		96	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

GC/MS VOA

Analysis Batch: 185264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	8260C	
LCS 480-185264/6	Lab Control Sample	Total/NA	Water	8260C	
LCS 480-185264/7	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-185264/9	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	RSK-175	
LCS 200-73327/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73327/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 185320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	RSK-175	
LCS 480-185320/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-185320/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-185320/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 185333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	3005A	
LCS 480-185333/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-185333/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 185788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	6010C	185333
LCS 480-185333/2-A	Lab Control Sample	Total/NA	Water	6010C	185333
MB 480-185333/1-A	Method Blank	Total/NA	Water	6010C	185333

General Chemistry

Analysis Batch: 185455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	SM 4500 S2 D	
LCS 480-185455/42	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-185455/41	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 185484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	353.2	
480-60962-1 MS	TK-6-060214	Total/NA	Water	353.2	
LCS 480-185484/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-185484/3	Method Blank	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

General Chemistry (Continued)

Analysis Batch: 185507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	353.2	

Analysis Batch: 185691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	SM 2320B	
LCS 480-185691/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-185691/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	300.0	
LCS 480-185892/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185892/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-185984/28	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185984/27	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 186884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	350.1	
LCS 480-186884/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-186884/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 186946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	9060A	
LCS 480-186946/13	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186946/12	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 187300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60962-1	TK-6-060214	Total/NA	Water	300.0	
LCS 480-187300/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-187300/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Client Sample ID: TK-6-060214

Lab Sample ID: 480-60962-1

Date Collected: 06/02/14 16:00

Matrix: Water

Date Received: 06/02/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	185264	06/03/14 05:49	CXM	TAL BUF
Total/NA	Analysis	RSK-175		1	73327	06/10/14 13:54	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	185320	06/03/14 09:18	MAN	TAL BUF
Total/NA	Prep	3005A			185333	06/03/14 09:05	SS1	TAL BUF
Total/NA	Analysis	6010C		1	185788	06/04/14 13:46	MTM2	TAL BUF
Total/NA	Analysis	300.0		20	185892	06/05/14 23:52	KRC	TAL BUF
Total/NA	Analysis	300.0		20	187300	06/12/14 13:37	KRC	TAL BUF
Total/NA	Analysis	350.1		1	186884	06/10/14 18:00	RS	TAL BUF
Total/NA	Analysis	353.2		1	185507	06/03/14 17:36	CLT	TAL BUF
Total/NA	Analysis	353.2		1	185484	06/03/14 17:36	CLT	TAL BUF
Total/NA	Analysis	9060A		1	186946	06/09/14 18:36	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	185691	06/04/14 11:01	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	185455	06/03/14 14:24	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60962-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60962-1	TK-6-060214	Water	06/02/14 16:00	06/02/14 16:50

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TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2298
 Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
 THE LABORATORY ENVIRONMENTAL TESTING

Client Information
 Client Contact: Mr. Tom Bohlen
 Company: GZA GeoEnvironmental, Inc.
 Address: 535 Washington Street, 11th Floor
 City: Buffalo
 State, Zip: NY, 14203
 Phone: 4062165
 Email: thomas.bohlen@gza.com
 Project Name: 058507_GM-Lockport Groundwater Sampling
 Site:

Sample Information
 Sampler: T. Bohlen
 Lab PW: Devo, Melissa L
 Phone: 716-685-2300
 E-Mail: melissa.devo@testamericainc.com
 Carrier Tracking No(s):
 COC No: 480-49375-13138.4
 Page: Page 4 of 4
 Job #:

Analysis Requested

Analysis Requested	Field Filtered Sample (Yes or No)	Performs MS/MSD (Yes or No)	330.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCB, TCE, DCE (trans and cis), Vinyl Chloride	9090 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2 Nitrite, Nitrate, Calc	2220B - Total Alkalinity	300.0, 28D - Anions (Chloride & Sulfate)	Total Number of Containers	Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=BIOTE, A=Air)	Preservation Code
TK-6-060214	6/2/14	1600	G	Water	
				Water	
				Water	
				Water	
				Water	
				Water	

480-60962 Chain of Custody

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Thomas Bohlen Date/Time: 6/2/14 1650
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Custody/Seals Intact: _____
 A Yes A No

Cooler Temperature(s) °C and Other Remarks: 4.0 #1



Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60962-1

Login Number: 60962

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60962-1

Login Number: 60962

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 06/05/14 03:32 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	251290
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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 Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-61056-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/17/2014 5:40:07 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery exceeds the control limits

General Chemistry

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.
*	LCS or LCSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Job ID: 480-61056-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-61056-1

Receipt

The samples were received on 6/3/2014 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: (480-61056-1 MS), (480-61056-1 MSD), BLDG-10-MW-1-060314 (480-61056-1). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: BLDG-10-MW-1-060314 (480-61056-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: BLDG-10-MW-1-060314 (480-61056-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

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

Metals

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

General Chemistry

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



Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Client Sample ID: BLDG-10-MW-1-060314

Lab Sample ID: 480-61056-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	120000		2000	720	ug/L	2000		8260C	Total/NA
Trichloroethene	2300		2000	920	ug/L	2000		8260C	Total/NA
Methane	7.7		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	1.0		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	87.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.42		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	414		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	240		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.16		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.033	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	5.4		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	315		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	19000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TB

Lab Sample ID: 480-61056-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Client Sample ID: BLDG-10-MW-1-060314

Lab Sample ID: 480-61056-1

Date Collected: 06/03/14 11:00

Matrix: Water

Date Received: 06/03/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		2000	1600	ug/L			06/11/14 17:44	2000
Tetrachloroethene	120000		2000	720	ug/L			06/11/14 17:44	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			06/11/14 17:44	2000
Trichloroethene	2300		2000	920	ug/L			06/11/14 17:44	2000
Vinyl chloride	ND		2000	1800	ug/L			06/11/14 17:44	2000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		66 - 137		06/11/14 17:44	2000
4-Bromofluorobenzene (Surr)	103		73 - 120		06/11/14 17:44	2000
Toluene-d8 (Surr)	102		71 - 126		06/11/14 17:44	2000
Dibromofluoromethane (Surr)	105		60 - 140		06/11/14 17:44	2000

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/05/14 10:11	1
Ethene	ND		7.0	1.5	ug/L			06/05/14 10:11	1
Methane	7.7		4.0	1.0	ug/L			06/05/14 10:11	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	19000		1000	1000	ug/L			06/10/14 14:04	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1.0		0.050	0.019	mg/L		06/06/14 07:45	06/06/14 18:12	1
Magnesium	87.3		0.20	0.043	mg/L		06/06/14 07:45	06/06/14 18:12	1
Manganese	0.42		0.0030	0.00040	mg/L		06/06/14 07:45	06/06/14 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	414		5.0	2.8	mg/L			06/06/14 07:38	10
Sulfate	240		20.0	3.5	mg/L			06/12/14 14:48	10
Ammonia	0.16		0.020	0.0090	mg/L			06/05/14 16:13	1
Nitrate	0.033	J	0.050	0.020	mg/L			06/04/14 18:29	1
Nitrite	ND		0.050	0.020	mg/L			06/05/14 01:46	1
Total Organic Carbon	5.4		1.0	0.43	mg/L			06/10/14 12:30	1
Total Alkalinity	315		5.0	0.79	mg/L			06/04/14 12:12	1
Sulfide	ND		0.10	0.052	mg/L			06/09/14 23:20	1

Client Sample ID: TB

Lab Sample ID: 480-61056-2

Date Collected: 06/03/14 00:00

Matrix: Water

Date Received: 06/03/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/11/14 18:05	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/11/14 18:05	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/11/14 18:05	1
Trichloroethene	ND		1.0	0.46	ug/L			06/11/14 18:05	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/11/14 18:05	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Client Sample ID: TB

Lab Sample ID: 480-61056-2

Date Collected: 06/03/14 00:00

Matrix: Water

Date Received: 06/03/14 16:50

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	107		66 - 137		06/11/14 18:05	1
4-Bromofluorobenzene (Surr)	104		73 - 120		06/11/14 18:05	1
Toluene-d8 (Surr)	103		71 - 126		06/11/14 18:05	1
Dibromofluoromethane (Surr)	109		60 - 140		06/11/14 18:05	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-61056-1	BLDG-10-MW-1-060314	105	103	102	105
480-61056-1 MS	BLDG-10-MW-1-060314	112	107	109	112
480-61056-1 MSD	BLDG-10-MW-1-060314	107	103	106	108
480-61056-2	TB	107	104	103	109
LCS 480-186999/6	Lab Control Sample	111	105	108	112
MB 480-186999/7	Method Blank	110	111	108	113

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-186999/7

Matrix: Water

Analysis Batch: 186999

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/11/14 13:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/11/14 13:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/11/14 13:30	1
Trichloroethene	ND		1.0	0.46	ug/L			06/11/14 13:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/11/14 13:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		66 - 137		06/11/14 13:30	1
4-Bromofluorobenzene (Surr)	111		73 - 120		06/11/14 13:30	1
Toluene-d8 (Surr)	108		71 - 126		06/11/14 13:30	1
Dibromofluoromethane (Surr)	113		60 - 140		06/11/14 13:30	1

Lab Sample ID: LCS 480-186999/6

Matrix: Water

Analysis Batch: 186999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	74 - 124
Tetrachloroethene	25.0	24.1		ug/L		96	74 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	24.9		ug/L		99	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	108		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

Lab Sample ID: 480-61056-1 MS

Matrix: Water

Analysis Batch: 186999

Client Sample ID: BLDG-10-MW-1-060314

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	ND		50000	54500		ug/L		109	74 - 124
Tetrachloroethene	120000		50000	202000	E F1	ug/L		166	74 - 122
trans-1,2-Dichloroethene	ND		50000	53600		ug/L		107	73 - 127
Trichloroethene	2300		50000	56500		ug/L		108	74 - 123

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		66 - 137
4-Bromofluorobenzene (Surr)	107		73 - 120
Toluene-d8 (Surr)	109		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-61056-1 MSD

Matrix: Water

Analysis Batch: 186999

Client Sample ID: BLDG-10-MW-1-060314

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
cis-1,2-Dichloroethene	ND		50000	51100		ug/L		102	74 - 124	6	15
Tetrachloroethene	120000		50000	189000	F1	ug/L		139	74 - 122	7	20
trans-1,2-Dichloroethene	ND		50000	49400		ug/L		99	73 - 127	8	20
Trichloroethene	2300		50000	52400		ug/L		100	74 - 123	7	16
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	107		66 - 137								
4-Bromofluorobenzene (Surr)	103		73 - 120								
Toluene-d8 (Surr)	106		71 - 126								
Dibromofluoromethane (Surr)	108		60 - 140								

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-185757/3

Matrix: Water

Analysis Batch: 185757

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ethane	ND		7.5	1.5	ug/L			06/05/14 07:25	1
Ethene	ND		7.0	1.5	ug/L			06/05/14 07:25	1
Methane	ND		4.0	1.0	ug/L			06/05/14 07:25	1

Lab Sample ID: LCS 480-185757/4

Matrix: Water

Analysis Batch: 185757

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier				Limits		
Ethane	14.6	13.5		ug/L		92	52 - 138		
Ethene	13.5	12.3		ug/L		91	50 - 137		
Methane	7.69	7.15		ug/L		93	48 - 174		

Lab Sample ID: LCSD 480-185757/5

Matrix: Water

Analysis Batch: 185757

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier				Limits		
Ethane	14.6	13.0		ug/L		89	52 - 138	4	50
Ethene	13.5	11.7		ug/L		87	50 - 137	5	50
Methane	7.69	6.94		ug/L		90	48 - 174	3	50

Lab Sample ID: MB 200-73327/3

Matrix: Water

Analysis Batch: 73327

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbon dioxide	ND		1000	1000	ug/L			06/10/14 13:35	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 200-73327/2
 Matrix: Water
 Analysis Batch: 73327

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5260		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-186037/1-A
 Matrix: Water
 Analysis Batch: 186424

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 186037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		06/06/14 07:45	06/06/14 17:15	1
Magnesium	ND		0.20	0.043	mg/L		06/06/14 07:45	06/06/14 17:15	1
Manganese	ND		0.0030	0.00040	mg/L		06/06/14 07:45	06/06/14 17:15	1

Lab Sample ID: LCS 480-186037/2-A
 Matrix: Water
 Analysis Batch: 186424

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 186037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.89		mg/L		99	80 - 120
Magnesium	10.0	10.36		mg/L		104	80 - 120
Manganese	0.200	0.205		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-185895/100
 Matrix: Water
 Analysis Batch: 185895

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/06/14 07:28	1
Sulfate	ND	^	2.0	0.35	mg/L			06/06/14 07:28	1

Lab Sample ID: LCS 480-185895/99
 Matrix: Water
 Analysis Batch: 185895

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.83		mg/L		104	90 - 110
Sulfate	20.0	22.14	^ *	mg/L		111	90 - 110

Lab Sample ID: MB 480-187300/4
 Matrix: Water
 Analysis Batch: 187300

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/12/14 12:57	1
Sulfate	ND		2.0	0.35	mg/L			06/12/14 12:57	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-187300/3

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.79		mg/L		99	90 - 110
Sulfate	20.0	21.18		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185980/51

Matrix: Water

Analysis Batch: 185980

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/05/14 16:08	1

Lab Sample ID: LCS 480-185980/52

Matrix: Water

Analysis Batch: 185980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186946/36

Matrix: Water

Analysis Batch: 186946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/10/14 04:25	1

Lab Sample ID: LCS 480-186946/37

Matrix: Water

Analysis Batch: 186946

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	61.23		mg/L		102	90 - 110

Lab Sample ID: 480-61056-1 DU

Matrix: Water

Analysis Batch: 186946

Client Sample ID: BLDG-10-MW-1-060314

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	5.4		5.22		mg/L		2	20

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-185691/6

Matrix: Water

Analysis Batch: 185691

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/04/14 10:35	1

Lab Sample ID: LCS 480-185691/7

Matrix: Water

Analysis Batch: 185691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.91		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-186736/3

Matrix: Water

Analysis Batch: 186736

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/09/14 23:20	1

Lab Sample ID: LCS 480-186736/4

Matrix: Water

Analysis Batch: 186736

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.814		mg/L		108	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

GC/MS VOA

Analysis Batch: 186999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	8260C	
480-61056-1 MS	BLDG-10-MW-1-060314	Total/NA	Water	8260C	
480-61056-1 MSD	BLDG-10-MW-1-060314	Total/NA	Water	8260C	
480-61056-2	TB	Total/NA	Water	8260C	
LCS 480-186999/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186999/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	RSK-175	
LCS 200-73327/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73327/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 185757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	RSK-175	
LCS 480-185757/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-185757/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-185757/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 186037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	3005A	
LCS 480-186037/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-186037/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 186424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	6010C	186037
LCS 480-186037/2-A	Lab Control Sample	Total/NA	Water	6010C	186037
MB 480-186037/1-A	Method Blank	Total/NA	Water	6010C	186037

General Chemistry

Analysis Batch: 185691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	SM 2320B	
LCS 480-185691/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-185691/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

General Chemistry (Continued)

Analysis Batch: 185744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	353.2	

Analysis Batch: 185895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	300.0	
LCS 480-185895/99	Lab Control Sample	Total/NA	Water	300.0	
MB 480-185895/100	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 185980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	350.1	
LCS 480-185980/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185980/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 186736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	SM 4500 S2 D	
LCS 480-186736/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-186736/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 186946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	9060A	
480-61056-1 DU	BLDG-10-MW-1-060314	Total/NA	Water	9060A	
LCS 480-186946/37	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186946/36	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 187300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61056-1	BLDG-10-MW-1-060314	Total/NA	Water	300.0	
LCS 480-187300/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-187300/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Client Sample ID: BLDG-10-MW-1-060314

Lab Sample ID: 480-61056-1

Date Collected: 06/03/14 11:00

Matrix: Water

Date Received: 06/03/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2000	186999	06/11/14 17:44	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	73327	06/10/14 14:04	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	185757	06/05/14 10:11	DLE	TAL BUF
Total/NA	Prep	3005A			186037	06/06/14 07:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	186424	06/06/14 18:12	MTM2	TAL BUF
Total/NA	Analysis	300.0		10	185895	06/06/14 07:38	KRC	TAL BUF
Total/NA	Analysis	300.0		10	187300	06/12/14 14:48	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185980	06/05/14 16:13	RS	TAL BUF
Total/NA	Analysis	353.2		1	185743	06/04/14 18:29	CLT	TAL BUF
Total/NA	Analysis	353.2		1	185744	06/05/14 01:46	CLT	TAL BUF
Total/NA	Analysis	9060A		1	186946	06/10/14 12:30	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	185691	06/04/14 12:12	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	186736	06/09/14 23:20	LAW	TAL BUF

Client Sample ID: TB

Lab Sample ID: 480-61056-2

Date Collected: 06/03/14 00:00

Matrix: Water

Date Received: 06/03/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	186999	06/11/14 18:05	NQN	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61056-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-61056-1	BLDG-10-MW-1-060314	Water	06/03/14 11:00	06/03/14 16:50
480-61056-2	TB	Water	06/03/14 00:00	06/03/14 16:50

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Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-61056-1

Login Number: 61056

List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-61056-1

Login Number: 61056

List Number: 2

Creator: Gagne, Eric M

List Source: TestAmerica Burlington

List Creation: 06/05/14 03:47 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877586
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2°C. IR GUN ID 181. CF = 0
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	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	No sample times listed on container labels
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-61058-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/17/2014 5:46:41 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Qualifiers

General Chemistry

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Job ID: 480-61058-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-61058-1

Receipt

The samples were received on 6/3/2014 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-3-060314 (480-61058-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-3-060314 (480-61058-1). Elevated reporting limits (RLs) are provided.

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

GC VOA

Method(s) RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-3-060314 (480-61058-1). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Client Sample ID: MW-7-3-060314

Lab Sample ID: 480-61058-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.7		1.0	0.81	ug/L	1		8260C	Total/NA
Vinyl chloride	57		1.0	0.90	ug/L	1		8260C	Total/NA
Ethane	8.6		7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	9.0		7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	310		100	25	ug/L	25		RSK-175	Total/NA
Iron	0.62		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	211		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.17		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	7260		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	906		200	34.9	mg/L	100		300.0	Total/NA
Ammonia	1.8		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.32		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.024	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.3		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	297		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	20000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TB

Lab Sample ID: 480-61058-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Client Sample ID: MW-7-3-060314

Lab Sample ID: 480-61058-1

Date Collected: 06/03/14 15:40

Matrix: Water

Date Received: 06/03/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	5.7		1.0	0.81	ug/L			06/11/14 18:26	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/11/14 18:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/11/14 18:26	1
Trichloroethene	ND		1.0	0.46	ug/L			06/11/14 18:26	1
Vinyl chloride	57		1.0	0.90	ug/L			06/11/14 18:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		66 - 137		06/11/14 18:26	1
4-Bromofluorobenzene (Surr)	106		73 - 120		06/11/14 18:26	1
Toluene-d8 (Surr)	106		71 - 126		06/11/14 18:26	1
Dibromofluoromethane (Surr)	111		60 - 140		06/11/14 18:26	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	8.6		7.5	1.5	ug/L			06/05/14 10:28	1
Ethene	9.0		7.0	1.5	ug/L			06/05/14 10:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	20000		1000	1000	ug/L			06/10/14 14:39	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	310		100	25	ug/L			06/05/14 12:05	25

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.62		0.050	0.019	mg/L		06/06/14 07:45	06/06/14 18:15	1
Magnesium	211		0.20	0.043	mg/L		06/06/14 07:45	06/06/14 18:15	1
Manganese	0.17		0.0030	0.00040	mg/L		06/06/14 07:45	06/06/14 18:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7260		50.0	28.2	mg/L			06/09/14 19:12	100
Sulfate	906		200	34.9	mg/L			06/12/14 14:58	100
Ammonia	1.8		0.020	0.0090	mg/L			06/05/14 16:14	1
Nitrate	0.32		0.050	0.020	mg/L			06/04/14 22:56	1
Nitrite	0.024	J	0.050	0.020	mg/L			06/04/14 22:56	1
Total Organic Carbon	2.3		1.0	0.43	mg/L			06/10/14 13:28	1
Total Alkalinity	297		5.0	0.79	mg/L			06/04/14 12:18	1
Sulfide	ND		0.10	0.052	mg/L			06/09/14 23:20	1

Client Sample ID: TB

Lab Sample ID: 480-61058-2

Date Collected: 06/03/14 00:00

Matrix: Water

Date Received: 06/03/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/11/14 18:47	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/11/14 18:47	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/11/14 18:47	1
Trichloroethene	ND		1.0	0.46	ug/L			06/11/14 18:47	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Client Sample ID: TB

Lab Sample ID: 480-61058-2

Date Collected: 06/03/14 00:00

Matrix: Water

Date Received: 06/03/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.90	ug/L			06/11/14 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137					06/11/14 18:47	1
4-Bromofluorobenzene (Surr)	103		73 - 120					06/11/14 18:47	1
Toluene-d8 (Surr)	104		71 - 126					06/11/14 18:47	1
Dibromofluoromethane (Surr)	108		60 - 140					06/11/14 18:47	1



Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (66-137)	BFB (73-120)	TOL (71-126)	DBFM (60-140)
480-61058-1	MW-7-3-060314	110	106	106	111
480-61058-2	TB	108	103	104	108
LCS 480-186999/6	Lab Control Sample	111	105	108	112
MB 480-186999/7	Method Blank	110	111	108	113

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-186999/7

Matrix: Water

Analysis Batch: 186999

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/11/14 13:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/11/14 13:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/11/14 13:30	1
Trichloroethene	ND		1.0	0.46	ug/L			06/11/14 13:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/11/14 13:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		66 - 137		06/11/14 13:30	1
4-Bromofluorobenzene (Surr)	111		73 - 120		06/11/14 13:30	1
Toluene-d8 (Surr)	108		71 - 126		06/11/14 13:30	1
Dibromofluoromethane (Surr)	113		60 - 140		06/11/14 13:30	1

Lab Sample ID: LCS 480-186999/6

Matrix: Water

Analysis Batch: 186999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	74 - 124
Tetrachloroethene	25.0	24.1		ug/L		96	74 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	24.9		ug/L		99	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	108		71 - 126
Dibromofluoromethane (Surr)	112		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-185757/3

Matrix: Water

Analysis Batch: 185757

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			06/05/14 07:25	1
Ethene	ND		7.0	1.5	ug/L			06/05/14 07:25	1
Methane	ND		4.0	1.0	ug/L			06/05/14 07:25	1

Lab Sample ID: LCS 480-185757/4

Matrix: Water

Analysis Batch: 185757

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	13.5		ug/L		92	52 - 138
Ethene	13.5	12.3		ug/L		91	50 - 137
Methane	7.69	7.15		ug/L		93	48 - 174

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-185757/5

Matrix: Water

Analysis Batch: 185757

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	13.0		ug/L		89	52 - 138	4	50
Ethene	13.5	11.7		ug/L		87	50 - 137	5	50
Methane	7.69	6.94		ug/L		90	48 - 174	3	50

Lab Sample ID: MB 200-73327/3

Matrix: Water

Analysis Batch: 73327

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			06/10/14 13:35	1

Lab Sample ID: LCS 200-73327/2

Matrix: Water

Analysis Batch: 73327

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5260		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-186037/1-A

Matrix: Water

Analysis Batch: 186424

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 186037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		06/06/14 07:45	06/06/14 17:15	1
Magnesium	ND		0.20	0.043	mg/L		06/06/14 07:45	06/06/14 17:15	1
Manganese	ND		0.0030	0.00040	mg/L		06/06/14 07:45	06/06/14 17:15	1

Lab Sample ID: LCS 480-186037/2-A

Matrix: Water

Analysis Batch: 186424

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 186037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.89		mg/L		99	80 - 120
Magnesium	10.0	10.36		mg/L		104	80 - 120
Manganese	0.200	0.205		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-186545/4

Matrix: Water

Analysis Batch: 186545

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/09/14 16:19	1
Sulfate	ND	^	2.0	0.35	mg/L			06/09/14 16:19	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-186545/3

Matrix: Water

Analysis Batch: 186545

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	21.06		mg/L		105	90 - 110
Sulfate	20.0	20.98	^	mg/L		105	90 - 110

Lab Sample ID: MB 480-187300/4

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			06/12/14 12:57	1
Sulfate	ND		2.0	0.35	mg/L			06/12/14 12:57	1

Lab Sample ID: LCS 480-187300/3

Matrix: Water

Analysis Batch: 187300

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.79		mg/L		99	90 - 110
Sulfate	20.0	21.18		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-185980/51

Matrix: Water

Analysis Batch: 185980

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			06/05/14 16:08	1

Lab Sample ID: LCS 480-185980/52

Matrix: Water

Analysis Batch: 185980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.03		mg/L		103	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-185733/27

Matrix: Water

Analysis Batch: 185733

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			06/04/14 23:21	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: MB 480-185733/3
 Matrix: Water
 Analysis Batch: 185733

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			06/04/14 22:54	1

Lab Sample ID: LCS 480-185733/28
 Matrix: Water
 Analysis Batch: 185733

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.52		mg/L		101	90 - 110

Lab Sample ID: LCS 480-185733/4
 Matrix: Water
 Analysis Batch: 185733

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.50		mg/L		100	90 - 110

Lab Sample ID: 480-61058-1 MS
 Matrix: Water
 Analysis Batch: 185733

Client Sample ID: MW-7-3-060314
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	0.024	J	1.00	1.01		mg/L		99	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-186946/36
 Matrix: Water
 Analysis Batch: 186946

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			06/10/14 04:25	1

Lab Sample ID: LCS 480-186946/37
 Matrix: Water
 Analysis Batch: 186946

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	61.23		mg/L		102	90 - 110

Lab Sample ID: 480-61058-1 MS
 Matrix: Water
 Analysis Batch: 186946

Client Sample ID: MW-7-3-060314
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.3		20.0	13.34		mg/L		55	54 - 131

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-185691/6

Matrix: Water

Analysis Batch: 185691

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			06/04/14 10:35	1

Lab Sample ID: LCS 480-185691/7

Matrix: Water

Analysis Batch: 185691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.91		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-186736/3

Matrix: Water

Analysis Batch: 186736

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			06/09/14 23:20	1

Lab Sample ID: LCS 480-186736/4

Matrix: Water

Analysis Batch: 186736

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.814		mg/L		108	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

GC/MS VOA

Analysis Batch: 186999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	8260C	
480-61058-2	TB	Total/NA	Water	8260C	
LCS 480-186999/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-186999/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 73327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	RSK-175	
LCS 200-73327/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-73327/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 185757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	RSK-175	
480-61058-1 - DL	MW-7-3-060314	Total/NA	Water	RSK-175	
LCS 480-185757/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-185757/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-185757/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 186037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	3005A	
LCS 480-186037/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-186037/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 186424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	6010C	186037
LCS 480-186037/2-A	Lab Control Sample	Total/NA	Water	6010C	186037
MB 480-186037/1-A	Method Blank	Total/NA	Water	6010C	186037

General Chemistry

Analysis Batch: 185691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	SM 2320B	
LCS 480-185691/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-185691/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 185733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	353.2	
480-61058-1 MS	MW-7-3-060314	Total/NA	Water	353.2	
LCS 480-185733/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-185733/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-185733/27	Method Blank	Total/NA	Water	353.2	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

General Chemistry (Continued)

Analysis Batch: 185733 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-185733/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 185743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	353.2	

Analysis Batch: 185980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	350.1	
LCS 480-185980/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-185980/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 186545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	300.0	
LCS 480-186545/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-186545/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 186736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	SM 4500 S2 D	
LCS 480-186736/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-186736/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 186946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	9060A	
480-61058-1 MS	MW-7-3-060314	Total/NA	Water	9060A	
LCS 480-186946/37	Lab Control Sample	Total/NA	Water	9060A	
MB 480-186946/36	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 187300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-61058-1	MW-7-3-060314	Total/NA	Water	300.0	
LCS 480-187300/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-187300/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Client Sample ID: MW-7-3-060314

Lab Sample ID: 480-61058-1

Date Collected: 06/03/14 15:40

Matrix: Water

Date Received: 06/03/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	186999	06/11/14 18:26	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	73327	06/10/14 14:39	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	185757	06/05/14 10:28	DLE	TAL BUF
Total/NA	Analysis	RSK-175	DL	25	185757	06/05/14 12:05	DLE	TAL BUF
Total/NA	Prep	3005A			186037	06/06/14 07:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	186424	06/06/14 18:15	MTM2	TAL BUF
Total/NA	Analysis	300.0		100	186545	06/09/14 19:12	KRC	TAL BUF
Total/NA	Analysis	300.0		100	187300	06/12/14 14:58	KRC	TAL BUF
Total/NA	Analysis	350.1		1	185980	06/05/14 16:14	RS	TAL BUF
Total/NA	Analysis	353.2		1	185743	06/04/14 22:56	CLT	TAL BUF
Total/NA	Analysis	353.2		1	185733	06/04/14 22:56	CLT	TAL BUF
Total/NA	Analysis	9060A		1	186946	06/10/14 13:28	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	185691	06/04/14 12:18	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	186736	06/09/14 23:20	LAW	TAL BUF

Client Sample ID: TB

Lab Sample ID: 480-61058-2

Date Collected: 06/03/14 00:00

Matrix: Water

Date Received: 06/03/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	186999	06/11/14 18:47	NQN	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14 *
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14 *
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14 *
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-61058-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-61058-1	MW-7-3-060314	Water	06/03/14 15:40	06/03/14 16:50
480-61058-2	TB	Water	06/03/14 00:00	06/03/14 16:50

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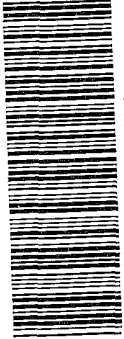
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TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2298
 Phone (716) 691-2600 Fax (716) 691-7991

Chain



TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information
 Client Contact: Mr. Tom Bohlen
 Company: GZA GeoEnvironmental, Inc.
 Address: 535 Washington Street 14th Floor
 City: Buffalo
 State, Zip: NY, 14203
 Phone: 4062165
 Email: thomas.bohlen@gza.com
 Project Name: 058507_GM-Lockport Groundwater Sampling
 Site: SSOW#

Supplier: T. Bohlen
 Phone: 716-685-2300
 E-Mail: melissa.oseyo@testamericainc.com
 COC No: 480-49375-13138.4
 Page: Page 4 of 4
 Job #:

Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=ore/sediment, BT=tissue, A=air)
6/3/14	1510	G	Water
			Water
			Water
			Water
			Water
			Water

Analysis Requested	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2 - Carbon dioxide	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chloride	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	333.2, 353.2, Nitrite, Nitrate, Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of Containers	Special Instructions/Note:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: Thomas Bohlen Date/Time: 6/3/14 1650 Company: _____

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

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

Custody Seals Intact: A Yes, B No

Custody Seal No.: # 2 3.8

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-61058-1

Login Number: 61058

List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-61058-1

Login Number: 61058

List Source: TestAmerica Burlington

List Number: 2

List Creation: 06/05/14 03:54 PM

Creator: Gagne, Eric M

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877486
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2°C. IR GUN ID 181. CF = 0
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	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	No sample times on container labels.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-60082-1

Client Project/Site: 058507, GM-Lockport Groundwater
Sampling

For:

Conestoga-Rovers & Associates, Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Kathleen Willy



Authorized for release by:

6/2/2014 2:53:59 PM

Rebecca Jones, Project Management Assistant I

rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I

(716)504-9874

melissa.deyo@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Qualifiers

GC/MS VOA

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.

GC VOA

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.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

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

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Job ID: 480-60082-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-60082-1

Receipt

The samples were received on 5/16/2014 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

GC/MS VOA

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-8-2-051614 (480-60082-2). Elevated reporting limits (RLs) are provided.

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

IC

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-7-P-1-051614 (480-60082-1), MW-8-2-051614 (480-60082-2), MW-8-3-051614W (480-60082-3). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: (480-60082-1 MS), (480-60082-1 MSD), MW-7-P-1-051614 (480-60082-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-8-2-051614 (480-60082-2), MW-8-3-051614W (480-60082-3). Elevated reporting limits (RLs) are provided.

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

GC VOA

Method(s) RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-P-1-051614 (480-60082-1), MW-8-3-051614W (480-60082-3). Elevated reporting limits (RLs) are provided.

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

Metals

Method(s) 6010C: The following sample was diluted to bring the concentration of target analyte total magnesium within the linear range: MW-7-P-1-051614 (480-60082-1). Elevated reporting limits (RLs) are provided.

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

General Chemistry

Method(s) SM 2320B: The method blank for batch 183129 contained alkalinity above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. MW-7-P-1-051614 (480-60082-1), MW-8-2-051614 (480-60082-2), MW-8-3-051614W (480-60082-3)

Method(s) 350.1: The method blank for batch 182933 contained ammonia above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. MW-8-3-051614W (480-60082-3)

Method(s) 353.2: The non-detect result for these sample(s) measures less than the negative reporting limit, 0.05 mg/L (results were less than -0.05 mg/L). The sample was reanalyzed undiluted and with a dilution which confirmed the non-detect result. MW-7-P-1-051614 (480-60082-1)

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

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-7-P-1-051614

Lab Sample ID: 480-60082-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.4		1.0	0.81	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	3.0		1.0	0.90	ug/L	1		8260C	Total/NA
Trichloroethene	0.78	J	1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	8.2		1.0	0.90	ug/L	1		8260C	Total/NA
Ethane	20		7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	1.8	J	7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	2200		200	50	ug/L	50		RSK-175	Total/NA
Iron	81.3		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	647		4.0	0.87	mg/L	20		6010C	Total/NA
Manganese	9.4		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	4420		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	43.1		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	141		4.0	1.8	mg/L	200		350.1	Total/NA
Total Organic Carbon	3.9		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	231	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.063	J	0.10	0.052	mg/L	1		SM 4500 S2 D	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	38000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-8-2-051614

Lab Sample ID: 480-60082-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	6400		130	100	ug/L	125		8260C	Total/NA
Trichloroethene	110	J	130	58	ug/L	125		8260C	Total/NA
Vinyl chloride	150		130	110	ug/L	125		8260C	Total/NA
Ethene	1.7	J	7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane	120		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.29		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	42.1		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.023		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	305		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	194		4.0	0.70	mg/L	2		300.0	Total/NA
Ammonia	0.78		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.067		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.3		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	366	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.27		0.10	0.052	mg/L	1		SM 4500 S2 D	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	10000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-8-3-051614

Lab Sample ID: 480-60082-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.2		1.0	0.81	ug/L	1		8260C	Total/NA
Methane	150		40	10	ug/L	10		RSK-175	Total/NA
Iron	3.8		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	102		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.7		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1710		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	56.6		20.0	3.5	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-8-3-051614 (Continued)

Lab Sample ID: 480-60082-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia	2.8	B	0.040	0.018	mg/L	2		350.1	Total/NA
Nitrate	0.076		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	7.0		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	364	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	9400		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-7-P-1-051614

Lab Sample ID: 480-60082-1

Date Collected: 05/16/14 11:15

Matrix: Water

Date Received: 05/16/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	2.4		1.0	0.81	ug/L			05/21/14 04:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/14 04:27	1
trans-1,2-Dichloroethene	3.0		1.0	0.90	ug/L			05/21/14 04:27	1
Trichloroethene	0.78	J	1.0	0.46	ug/L			05/21/14 04:27	1
Vinyl chloride	8.2		1.0	0.90	ug/L			05/21/14 04:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		66 - 137		05/21/14 04:27	1
4-Bromofluorobenzene (Surr)	99		73 - 120		05/21/14 04:27	1
Toluene-d8 (Surr)	103		71 - 126		05/21/14 04:27	1
Dibromofluoromethane (Surr)	102		60 - 140		05/21/14 04:27	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	20		7.5	1.5	ug/L			05/19/14 12:05	1
Ethene	1.8	J	7.0	1.5	ug/L			05/19/14 12:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	38000		1000	1000	ug/L			05/22/14 15:01	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	2200		200	50	ug/L			05/19/14 13:03	50

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	81.3		0.050	0.019	mg/L		05/19/14 09:45	05/20/14 21:15	1
Magnesium	647		4.0	0.87	mg/L		05/19/14 09:45	05/21/14 15:32	20
Manganese	9.4		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 21:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4420		50.0	28.2	mg/L			05/21/14 18:14	100
Sulfate	43.1		40.0	7.0	mg/L			05/20/14 16:44	20
Ammonia	141		4.0	1.8	mg/L			05/19/14 20:46	200
Nitrate	ND		0.050	0.020	mg/L			05/17/14 12:43	1
Nitrite	ND		0.050	0.020	mg/L			05/17/14 12:43	1
Total Organic Carbon	3.9		1.0	0.43	mg/L			05/28/14 17:59	1
Total Alkalinity	231	B	5.0	0.79	mg/L			05/20/14 11:23	1
Sulfide	0.063	J	0.10	0.052	mg/L			05/21/14 12:47	1

Client Sample ID: MW-8-2-051614

Lab Sample ID: 480-60082-2

Date Collected: 05/16/14 15:00

Matrix: Water

Date Received: 05/16/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	6400		130	100	ug/L			05/21/14 04:49	125
Tetrachloroethene	ND		130	45	ug/L			05/21/14 04:49	125
trans-1,2-Dichloroethene	ND		130	110	ug/L			05/21/14 04:49	125
Trichloroethene	110	J	130	58	ug/L			05/21/14 04:49	125

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-8-2-051614

Lab Sample ID: 480-60082-2

Date Collected: 05/16/14 15:00

Matrix: Water

Date Received: 05/16/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	150		130	110	ug/L			05/21/14 04:49	125
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137					05/21/14 04:49	125
4-Bromofluorobenzene (Surr)	101		73 - 120					05/21/14 04:49	125
Toluene-d8 (Surr)	105		71 - 126					05/21/14 04:49	125
Dibromofluoromethane (Surr)	105		60 - 140					05/21/14 04:49	125

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/19/14 12:22	1
Ethene	1.7	J	7.0	1.5	ug/L			05/19/14 12:22	1
Methane	120		4.0	1.0	ug/L			05/19/14 12:22	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	10000		1000	1000	ug/L			05/22/14 15:09	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.29		0.050	0.019	mg/L		05/19/14 09:45	05/20/14 21:18	1
Magnesium	42.1		0.20	0.043	mg/L		05/19/14 09:45	05/20/14 21:18	1
Manganese	0.023		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 21:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	305		2.5	1.4	mg/L			05/21/14 19:25	5
Sulfate	194		4.0	0.70	mg/L			05/20/14 16:54	2
Ammonia	0.78		0.020	0.0090	mg/L			05/19/14 19:07	1
Nitrate	0.067		0.050	0.020	mg/L			05/17/14 12:44	1
Nitrite	ND		0.050	0.020	mg/L			05/17/14 12:44	1
Total Organic Carbon	2.3		1.0	0.43	mg/L			05/28/14 18:27	1
Total Alkalinity	366	B	5.0	0.79	mg/L			05/20/14 11:29	1
Sulfide	0.27		0.10	0.052	mg/L			05/21/14 12:49	1

Client Sample ID: MW-8-3-051614

Lab Sample ID: 480-60082-3

Date Collected: 05/16/14 15:50

Matrix: Water

Date Received: 05/16/14 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	2.2		1.0	0.81	ug/L			05/21/14 05:10	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/14 05:10	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/14 05:10	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/14 05:10	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/14 05:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		66 - 137					05/21/14 05:10	1
4-Bromofluorobenzene (Surr)	99		73 - 120					05/21/14 05:10	1
Toluene-d8 (Surr)	102		71 - 126					05/21/14 05:10	1
Dibromofluoromethane (Surr)	104		60 - 140					05/21/14 05:10	1

TestAmerica Buffalo

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-8-3-051614

Lab Sample ID: 480-60082-3

Date Collected: 05/16/14 15:50

Matrix: Water

Date Received: 05/16/14 16:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		75	15	ug/L			05/19/14 13:21	10
Ethene	ND		70	15	ug/L			05/19/14 13:21	10
Methane	150		40	10	ug/L			05/19/14 13:21	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	9400		1000	1000	ug/L			05/22/14 15:17	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	3.8		0.050	0.019	mg/L		05/19/14 09:45	05/20/14 21:21	1
Magnesium	102		0.20	0.043	mg/L		05/19/14 09:45	05/20/14 21:21	1
Manganese	1.7		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 21:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1710		10.0	5.6	mg/L			05/21/14 19:35	20
Sulfate	56.6		20.0	3.5	mg/L			05/20/14 17:04	10
Ammonia	2.8	B	0.040	0.018	mg/L			05/19/14 20:29	2
Nitrate	0.076		0.050	0.020	mg/L			05/17/14 12:46	1
Nitrite	ND		0.050	0.020	mg/L			05/17/14 12:46	1
Total Organic Carbon	7.0		1.0	0.43	mg/L			05/28/14 21:40	1
Total Alkalinity	364	B	5.0	0.79	mg/L			05/20/14 11:49	1
Sulfide	ND		0.10	0.052	mg/L			05/21/14 12:51	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(66-137)	(73-120)	(71-126)	(60-140)
480-60082-1	MW-7-P-1-051614	109	99	103	102
480-60082-2	MW-8-2-051614	108	101	105	105
480-60082-3	MW-8-3-051614	107	99	102	104
LCS 480-183180/4	Lab Control Sample	101	104	101	105
MB 480-183180/6	Method Blank	105	98	104	100

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-183180/6
Matrix: Water
Analysis Batch: 183180

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/20/14 22:21	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/14 22:21	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/14 22:21	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/14 22:21	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/14 22:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		66 - 137		05/20/14 22:21	1
4-Bromofluorobenzene (Surr)	98		73 - 120		05/20/14 22:21	1
Toluene-d8 (Surr)	104		71 - 126		05/20/14 22:21	1
Dibromofluoromethane (Surr)	100		60 - 140		05/20/14 22:21	1

Lab Sample ID: LCS 480-183180/4
Matrix: Water
Analysis Batch: 183180

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	74 - 124
Tetrachloroethene	25.0	21.9		ug/L		88	74 - 122
trans-1,2-Dichloroethene	25.0	24.4		ug/L		98	73 - 127
Trichloroethene	25.0	23.9		ug/L		96	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
4-Bromofluorobenzene (Surr)	104		73 - 120
Toluene-d8 (Surr)	101		71 - 126
Dibromofluoromethane (Surr)	105		60 - 140

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-182767/23
Matrix: Water
Analysis Batch: 182767

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/19/14 09:01	1
Ethene	ND		7.0	1.5	ug/L			05/19/14 09:01	1
Methane	ND		4.0	1.0	ug/L			05/19/14 09:01	1

Lab Sample ID: LCS 480-182767/24
Matrix: Water
Analysis Batch: 182767

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.0		ug/L		96	52 - 138
Ethene	13.5	12.8		ug/L		95	50 - 137
Methane	7.69	7.67		ug/L		100	48 - 174

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-182767/25
Matrix: Water
Analysis Batch: 182767

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	13.9		ug/L		95	52 - 138	1	50
Ethene	13.5	12.7		ug/L		94	50 - 137	2	50
Methane	7.69	7.59		ug/L		99	48 - 174	1	50

Lab Sample ID: MB 200-72523/3
Matrix: Water
Analysis Batch: 72523

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/22/14 14:36	1

Lab Sample ID: LCS 200-72523/2
Matrix: Water
Analysis Batch: 72523

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	4690		ug/L		94	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-182755/1-A
Matrix: Water
Analysis Batch: 183294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182755

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/19/14 09:45	05/20/14 19:49	1
Magnesium	ND		0.20	0.043	mg/L		05/19/14 09:45	05/20/14 19:49	1
Manganese	ND		0.0030	0.00040	mg/L		05/19/14 09:45	05/20/14 19:49	1

Lab Sample ID: LCS 480-182755/2-A
Matrix: Water
Analysis Batch: 183294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182755

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.24		mg/L		92	80 - 120
Magnesium	10.0	9.93		mg/L		99	80 - 120
Manganese	0.200	0.190		mg/L		95	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-182879/124
Matrix: Water
Analysis Batch: 182879

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/20/14 14:12	1
Sulfate	ND		2.0	0.35	mg/L			05/20/14 14:12	1

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-182879/123

Matrix: Water

Analysis Batch: 182879

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.11		mg/L		101	90 - 110
Sulfate	20.0	19.12		mg/L		96	90 - 110

Lab Sample ID: MB 480-183351/4

Matrix: Water

Analysis Batch: 183351

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/21/14 15:11	1
Sulfate	ND		2.0	0.35	mg/L			05/21/14 15:11	1

Lab Sample ID: LCS 480-183351/3

Matrix: Water

Analysis Batch: 183351

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.37		mg/L		97	90 - 110
Sulfate	20.0	20.66		mg/L		103	90 - 110

Lab Sample ID: 480-60082-1 MS

Matrix: Water

Analysis Batch: 183351

Client Sample ID: MW-7-P-1-051614

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4420		2500	6782		mg/L		94	90 - 110

Lab Sample ID: 480-60082-1 MSD

Matrix: Water

Analysis Batch: 183351

Client Sample ID: MW-7-P-1-051614

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	4420		2500	6687		mg/L		90	90 - 110	1	20

Lab Sample ID: MB 480-183353/28

Matrix: Water

Analysis Batch: 183353

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/21/14 19:14	1
Sulfate	ND	^	2.0	0.35	mg/L			05/21/14 19:14	1

Lab Sample ID: LCS 480-183353/27

Matrix: Water

Analysis Batch: 183353

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.46		mg/L		97	90 - 110
Sulfate	20.0	20.78	^	mg/L		104	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-182932/27
Matrix: Water
Analysis Batch: 182932

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/19/14 19:02	1

Lab Sample ID: MB 480-182932/3
Matrix: Water
Analysis Batch: 182932

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/19/14 18:39	1

Lab Sample ID: LCS 480-182932/28
Matrix: Water
Analysis Batch: 182932

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.990		mg/L		99	90 - 110

Lab Sample ID: LCS 480-182932/4
Matrix: Water
Analysis Batch: 182932

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.985		mg/L		99	90 - 110

Lab Sample ID: MB 480-182933/27
Matrix: Water
Analysis Batch: 182933

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/19/14 20:37	1

Lab Sample ID: MB 480-182933/3
Matrix: Water
Analysis Batch: 182933

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.0119	J	0.020	0.0090	mg/L			05/19/14 20:14	1

Lab Sample ID: LCS 480-182933/28
Matrix: Water
Analysis Batch: 182933

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Lab Sample ID: LCS 480-182933/4
Matrix: Water
Analysis Batch: 182933

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.995		mg/L		99	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-182705/3
 Matrix: Water
 Analysis Batch: 182705

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/17/14 12:40	1

Lab Sample ID: LCS 480-182705/4
 Matrix: Water
 Analysis Batch: 182705

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.57		mg/L		105	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-184775/3
 Matrix: Water
 Analysis Batch: 184775

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/28/14 16:10	1

Lab Sample ID: LCS 480-184775/4
 Matrix: Water
 Analysis Batch: 184775

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	55.12		mg/L		92	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-183129/30
 Matrix: Water
 Analysis Batch: 183129

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/20/14 13:05	1

Lab Sample ID: MB 480-183129/6
 Matrix: Water
 Analysis Batch: 183129

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.01	J	5.0	0.79	mg/L			05/20/14 10:35	1

Lab Sample ID: LCS 480-183129/31
 Matrix: Water
 Analysis Batch: 183129

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.43		mg/L		94	90 - 110

TestAmerica Buffalo

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-183129/7

Matrix: Water

Analysis Batch: 183129

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.69		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-183372/27

Matrix: Water

Analysis Batch: 183372

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/21/14 13:00	1

Lab Sample ID: MB 480-183372/3

Matrix: Water

Analysis Batch: 183372

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/21/14 12:07	1

Lab Sample ID: LCS 480-183372/28

Matrix: Water

Analysis Batch: 183372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.741		mg/L		99	90 - 110

Lab Sample ID: LCS 480-183372/4

Matrix: Water

Analysis Batch: 183372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.750		mg/L		100	90 - 110

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

GC/MS VOA

Analysis Batch: 183180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	8260C	
480-60082-2	MW-8-2-051614	Total/NA	Water	8260C	
480-60082-3	MW-8-3-051614	Total/NA	Water	8260C	
LCS 480-183180/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-183180/6	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 72523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	RSK-175	
480-60082-2	MW-8-2-051614	Total/NA	Water	RSK-175	
480-60082-3	MW-8-3-051614	Total/NA	Water	RSK-175	
LCS 200-72523/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-72523/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 182767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	RSK-175	
480-60082-1 - DL	MW-7-P-1-051614	Total/NA	Water	RSK-175	
480-60082-2	MW-8-2-051614	Total/NA	Water	RSK-175	
480-60082-3	MW-8-3-051614	Total/NA	Water	RSK-175	
LCS 480-182767/24	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 480-182767/25	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-182767/23	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 182755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	3005A	
480-60082-2	MW-8-2-051614	Total/NA	Water	3005A	
480-60082-3	MW-8-3-051614	Total/NA	Water	3005A	
LCS 480-182755/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-182755/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 183294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	6010C	182755
480-60082-2	MW-8-2-051614	Total/NA	Water	6010C	182755
480-60082-3	MW-8-3-051614	Total/NA	Water	6010C	182755
LCS 480-182755/2-A	Lab Control Sample	Total/NA	Water	6010C	182755
MB 480-182755/1-A	Method Blank	Total/NA	Water	6010C	182755

Analysis Batch: 183506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	6010C	182755

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

General Chemistry

Analysis Batch: 182705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	353.2	
480-60082-2	MW-8-2-051614	Total/NA	Water	353.2	
480-60082-3	MW-8-3-051614	Total/NA	Water	353.2	
LCS 480-182705/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-182705/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 182706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	353.2	
480-60082-2	MW-8-2-051614	Total/NA	Water	353.2	
480-60082-3	MW-8-3-051614	Total/NA	Water	353.2	

Analysis Batch: 182879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	300.0	
480-60082-2	MW-8-2-051614	Total/NA	Water	300.0	
480-60082-3	MW-8-3-051614	Total/NA	Water	300.0	
LCS 480-182879/123	Lab Control Sample	Total/NA	Water	300.0	
MB 480-182879/124	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 182932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-2	MW-8-2-051614	Total/NA	Water	350.1	
LCS 480-182932/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-182932/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-182932/27	Method Blank	Total/NA	Water	350.1	
MB 480-182932/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 182933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	350.1	
480-60082-3	MW-8-3-051614	Total/NA	Water	350.1	
LCS 480-182933/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-182933/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-182933/27	Method Blank	Total/NA	Water	350.1	
MB 480-182933/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 183129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	SM 2320B	
480-60082-2	MW-8-2-051614	Total/NA	Water	SM 2320B	
480-60082-3	MW-8-3-051614	Total/NA	Water	SM 2320B	
LCS 480-183129/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-183129/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-183129/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-183129/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 183351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	300.0	
480-60082-1 MS	MW-7-P-1-051614	Total/NA	Water	300.0	

TestAmerica Buffalo

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

General Chemistry (Continued)

Analysis Batch: 183351 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1 MSD	MW-7-P-1-051614	Total/NA	Water	300.0	
LCS 480-183351/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-183351/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 183353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-2	MW-8-2-051614	Total/NA	Water	300.0	
480-60082-3	MW-8-3-051614	Total/NA	Water	300.0	
LCS 480-183353/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-183353/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 183372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	SM 4500 S2 D	
480-60082-2	MW-8-2-051614	Total/NA	Water	SM 4500 S2 D	
480-60082-3	MW-8-3-051614	Total/NA	Water	SM 4500 S2 D	
LCS 480-183372/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCS 480-183372/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-183372/27	Method Blank	Total/NA	Water	SM 4500 S2 D	
MB 480-183372/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 184775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-60082-1	MW-7-P-1-051614	Total/NA	Water	9060A	
480-60082-2	MW-8-2-051614	Total/NA	Water	9060A	
480-60082-3	MW-8-3-051614	Total/NA	Water	9060A	
LCS 480-184775/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-184775/3	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-7-P-1-051614

Lab Sample ID: 480-60082-1

Date Collected: 05/16/14 11:15

Matrix: Water

Date Received: 05/16/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	183180	05/21/14 04:27	RAS	TAL BUF
Total/NA	Analysis	RSK-175		1	72523	05/22/14 15:01	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	182767	05/19/14 12:05	JRL	TAL BUF
Total/NA	Analysis	RSK-175	DL	50	182767	05/19/14 13:03	JRL	TAL BUF
Total/NA	Prep	3005A			182755	05/19/14 09:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	183294	05/20/14 21:15	LMH	TAL BUF
Total/NA	Prep	3005A			182755	05/19/14 09:45	EHD	TAL BUF
Total/NA	Analysis	6010C		20	183506	05/21/14 15:32	LMH	TAL BUF
Total/NA	Analysis	300.0		20	182879	05/20/14 16:44	KRC	TAL BUF
Total/NA	Analysis	300.0		100	183351	05/21/14 18:14	KRC	TAL BUF
Total/NA	Analysis	350.1		200	182933	05/19/14 20:46	RS	TAL BUF
Total/NA	Analysis	353.2		1	182705	05/17/14 12:43	EGS	TAL BUF
Total/NA	Analysis	353.2		1	182706	05/17/14 12:43	EGS	TAL BUF
Total/NA	Analysis	9060A		1	184775	05/28/14 17:59	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	183129	05/20/14 11:23	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	183372	05/21/14 12:47	KJ1	TAL BUF

Client Sample ID: MW-8-2-051614

Lab Sample ID: 480-60082-2

Date Collected: 05/16/14 15:00

Matrix: Water

Date Received: 05/16/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		125	183180	05/21/14 04:49	RAS	TAL BUF
Total/NA	Analysis	RSK-175		1	72523	05/22/14 15:09	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	182767	05/19/14 12:22	JRL	TAL BUF
Total/NA	Prep	3005A			182755	05/19/14 09:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	183294	05/20/14 21:18	LMH	TAL BUF
Total/NA	Analysis	300.0		2	182879	05/20/14 16:54	KRC	TAL BUF
Total/NA	Analysis	300.0		5	183353	05/21/14 19:25	KRC	TAL BUF
Total/NA	Analysis	350.1		1	182932	05/19/14 19:07	RS	TAL BUF
Total/NA	Analysis	353.2		1	182705	05/17/14 12:44	EGS	TAL BUF
Total/NA	Analysis	353.2		1	182706	05/17/14 12:44	EGS	TAL BUF
Total/NA	Analysis	9060A		1	184775	05/28/14 18:27	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	183129	05/20/14 11:29	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	183372	05/21/14 12:49	KJ1	TAL BUF

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Client Sample ID: MW-8-3-051614

Lab Sample ID: 480-60082-3

Date Collected: 05/16/14 15:50

Matrix: Water

Date Received: 05/16/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	183180	05/21/14 05:10	RAS	TAL BUF
Total/NA	Analysis	RSK-175		1	72523	05/22/14 15:17	NEA	TAL BUR
Total/NA	Analysis	RSK-175		10	182767	05/19/14 13:21	JRL	TAL BUF
Total/NA	Prep	3005A			182755	05/19/14 09:45	EHD	TAL BUF
Total/NA	Analysis	6010C		1	183294	05/20/14 21:21	LMH	TAL BUF
Total/NA	Analysis	300.0		10	182879	05/20/14 17:04	KRC	TAL BUF
Total/NA	Analysis	300.0		20	183353	05/21/14 19:35	KRC	TAL BUF
Total/NA	Analysis	350.1		2	182933	05/19/14 20:29	RS	TAL BUF
Total/NA	Analysis	353.2		1	182705	05/17/14 12:46	EGS	TAL BUF
Total/NA	Analysis	353.2		1	182706	05/17/14 12:46	EGS	TAL BUF
Total/NA	Analysis	9060A		1	184775	05/28/14 21:40	KRC	TAL BUF
Total/NA	Analysis	SM 2320B		1	183129	05/20/14 11:49	VAJ	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	183372	05/21/14 12:51	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	State Program	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-15
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	03-31-15
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-14 *
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-15
Wisconsin	State Program	5	998310390	08-31-14

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-14 *
L-A-B	DoD ELAP		L2336	02-26-17
Louisiana	NELAP	6	176292	06-30-14
Maine	State Program	1	VT00008	04-17-15
Minnesota	NELAP	5	050-999-436	12-31-14
New Hampshire	NELAP	1	2006	12-18-14
New Jersey	NELAP	2	VT972	06-30-14 *
New York	NELAP	2	10391	03-31-15
Pennsylvania	NELAP	3	68-00489	04-30-15
Rhode Island	State Program	1	LAO00298	12-30-14
US Fish & Wildlife	Federal		LE-058448-0	02-28-15
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-14

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

TestAmerica Buffalo

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460209	12-14-14

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Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-60082-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-60082-1	MW-7-P-1-051614	Water	05/16/14 11:15	05/16/14 16:50
480-60082-2	MW-8-2-051614	Water	05/16/14 15:00	05/16/14 16:50
480-60082-3	MW-8-3-051614	Water	05/16/14 15:50	05/16/14 16:50

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TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2298
 Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record



Client Information		Lab PM: Deyo, Melissa L		Carrier Tracking No(s):		COC No: 480-49375-13138.4	
Client Contact: Mr. Tom Bohlen		E-Mail: melissa.deyo@testamericainc.com		Pages: Page 4 of 4			
Company: GZA GeoEnvironmental, Inc.		Address: 535 Washington Street 11th Floor		City: Buffalo		State: NY, Zip: 14203	
Phone: 4062165		PO #: 4062165		WO #: 58507		Project #: 48004014	
Email: thomas.bohlen@gza.com		SSOW#: 48004014		Site: GM-Lockport Groundwater Sampling			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/soil, I=In-Tissue, A=Air)	Analysis Requested		Special Instructions/Note:
					Field Filtered Sample (Yes or No)	Performance/MSD (Yes or No)	
MW-7-P-1-051614	5/16/14	1115	G	Water	X	X	480-60082 Chain of Custody
MW-8-2-051614	↓	1500	↓	Water	X	X	
MW-8-3-051614	↓	1550	↓	Water	X	X	
				Water			
				Water			
				Water			

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: Thomas Bohlen		Received by: [Signature]	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Company: GZA		Company:	
Date/Time: 5/16/14 16:50		Date/Time: 5/16/14 16:50	
Date/Time:		Date/Time:	
Date/Time:		Date/Time:	
Custody Seal No.: A 2 3 C		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60082-1

Login Number: 60082

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	gza
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-60082-1

Login Number: 60082

List Number: 2

Creator: Marion, Greg T

List Source: TestAmerica Burlington

List Creation: 05/20/14 01:34 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	877478
Sample custody seals, if present, are intact.	N/A	Not present
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	4.4°C IR GUN ID 181/CF=0
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

