September 3, 2015
File No. 21.0056546.00

Mr. Glenn May
NYSDEC Region 9
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203

Re: Results of May 2015 Groundwater Sampling
BCP Site # C932138
GM Components Holdings, LLC
200 Upper Mountain Road
Lockport, NY 14094

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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 2015 groundwater sampling event conducted at Brownfield Cleanup Program (BCP) Site (C932138) at the GMCH facility located at 200 Upper Mountain Road in Lockport, New York. The groundwater sampling event was conducted from May 6th through May 26th, 2015 and included a total of 25 monitoring wells (see Figure 1). Eleven wells are in proximity of 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). Eight wells are in proximity of Building 8 (MW-6-1, 6-2, 6-F-8, 8-1, 8-1, 8-3, 8-4, and 8-003-B) and six wells are in proximity of Building 10 (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 5, 2015.

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. 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.

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 BCP agreements for Sites C932139 C932140 have been withdrawn from the BCP.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.

GMCH has been voluntarily collecting groundwater samples from the BCP Site(s) annually since the 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 Plan[2] (SMP). The SMP was developed to provide annual sampling and reporting requirements for the Delphi Site located in the eastern portion of the GMCH facility and property owned by Mahle Behr Troy Inc. and downgradient of Building 7, 8 and 10. The 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.

GROUNDWATER MONITORING & SAMPLING

The May 2015 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 6th through May 26th, 2015. In addition to the MNA parameters identified in the SMP, carbon dioxide (CO_2), 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.

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

[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.

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 one monitoring well location (MW-7-4). This location was purged to dry-like conditions and allowed to recharge until the water level recovered to within 85% of the water level measured prior to sampling.

Table 1 provides a summary of the groundwater sample analytical 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.*, 1998[3], to evaluate the MNA performance data.

PASSIVE DIFFUSION BAG PILOT TEST

Soon after completion of the May 2015 groundwater sampling field effort, a pilot study was conducted to test the viability of using passive diffusion bags (PDBs) as a collection tool for VOC samples during future sampling events. PDBs have been approved and successfully used at other sites where groundwater monitoring is performed within a NYSDEC remedial program. A primary benefit of the PDBs is that they require no pre-purging of the well prior to sample collection, thus reducing time and cost. A pilot study scope of work which was approved by the Department on May 11, 2015, was followed to test the viability of using PDBs at the GMCH Site. A set of five wells were selected for use in the pilot study, including MW-7-3, MW-7-6, MW-7-P-1, MW-8-4, and MW-10-3. These wells were chosen considering the following criteria:

- Wells that historically contain some measurable amount of CVOCs but not located in the area of highest CVOC concentrations;
- Wells that are considered to be of relatively low value for monitoring

[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.

natural attenuation parameters and thus may be recommended for VOC only sampling and for which a purge-free sampling method would be particularly beneficial.

PDBs were placed into the five wells on June 5, 2015 and left in the wells for 21 days before removal on June 26, 2015. Samples collected using the PDBs were analyzed for the same list of five COCs and by the same laboratory (Test America) as those of the annual monitoring program. Discussion of the analytical results and comparability of the data with that collected using traditional purge and sample method is provided in the Analytical Results section below after discussions of the groundwater monitoring results.

WELL CONDITION ASSESSMENT

In conjunction with the May 2015 groundwater monitoring effort, GZA conducted a condition assessment of the 46 groundwater monitoring wells present on the GMCH and Delphi Harrison Thermal Systems sites. The objective of the condition assessment was to document the physical condition of each monitoring well and to identify necessary and desired maintenance and repairs to the wells to preserve well integrity for collection of representative groundwater elevations and groundwater quality samples. Table E-1 in Appendix E lists the attributes that were observed and recorded for each well along with the findings of the assessment. Based on the conditions assessment GMCH intends to complete the requisite well maintenance activities during the summer/fall of 2015.

ANALYTICAL RESULTS & DISCUSSION

Building 7

Eleven monitoring wells were sampled in association with 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 Building 7.

Potential Source Area

The 2015 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. Evidence for anaerobic biodegradation at MW-7-7 and MW-7-A-6, is indicated by the increase of daughter compounds TCE, *cis*-DCE, *trans*-DCE, to VC which is indicative of natural attenuation.

Mid-Plume Area

The 2015 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 and MW-7-C-2), adequate evidence (MW-7-6), and strong 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 criteria[4]. COCs were detected at MW-7-3 (50 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 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 the 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 through 2014 sample results.

[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).

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, and 2014 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 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-7-3: VC was the only compound detected at this location, and the concentration is consistent with the annual sample results since 2010. The detected concentration is above its respective Class GA criterion. 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 have 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, and 2014 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 2015 results indicate similar PCE, TCE, and *cis*-DCE concentrations as the 2014 results. The concentrations detected for these three compounds exceed their respective Class GA criteria. VC concentration was below its PQL since 2012.

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

MW-7-6: The results show decreasing 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: PCE concentrations have decreased significantly since 2013 while concentrations of breakdown products TCE, *cis*-DCE, and VC have increased over that same time period.

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

MW-7-8: The results indicate an increase in the 1,2-DCE and VC concentrations and a decrease in PCE and TCE. The detected concentrations of these COCs are above their respective Class GA criteria.

The MNA data indicates there is limited evidence of anaerobic biodegradation at this location.

MW-7-A-6: Concentration results for all COCs have decreased since 2014. The concentrations of the COCs are above their respective Class GA criteria.

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

MW-7-C-2: The results for *cis*-DCE and VC have been relatively 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 began 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

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 Building 8.

The highest COC concentrations have consistently been detected in wells MW-8-2 (1,634 ppb) and MW-8-003-B (105 ppb). The concentrations of COCs detected at both these locations have shown significant decreases since 2014. 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 associated with Building 8 is migrating towards the east (downgradient) in the area of the Delphi Harrison Thermal Systems (DHTS) site easement area and a portion

of the Mahle property outside the easement area (see Figure 2). Natural attenuation processes are reducing the COC contamination to non-detectable levels or below the NYSDEC Class GA criteria along Upper Mountain Road (see Figure 3). Consistent with past sampling events, no VOCs were detected above the PQL at monitoring wells MW-6-1 and MW-6-2 located east of Building 8 along Upper Mountain Road and north of the DHTS site easement area.

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 migration of groundwater contamination does not appear to be occurring.

Building 8 Individual Well Discussions

MW-6-1: The results for the COCs were below PQLs, which is less than the Class GA criteria. This is 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 inadequate 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 2015 results for the COCs were all below PQLs. Cis-DCE was detected in 2011, 2012, and 2014 at concentrations below the Class GA criteria of 5 ug/l. The detected concentrations of DCE in all four years were below 1 ppb.

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 2015 results for TCE, *cis*-DCE, and VC indicate a decrease in concentration since 2013. The detected concentration of these compounds has been above their respective Class GA criteria. PCE was detected in 2015 for the first time at a concentration (10 ppb) above its Class GA criteria of 5 ppb. The MNA data indicates there is limited evidence for anaerobic biodegradation.

MW-8-3: 2015 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: 2015 results for *cis*-DCE and VC show an increase in concentration since the 2014 sampling. The detected concentrations of these compounds and that of TCE 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 limited evidence for anaerobic biodegradation.

MW-8-003-B: 2015 results for the COCs continue to show a general decrease in concentrations since 2012. The detected concentration of these compounds has been above their respective Class GA criteria, with the recent exception of VC which for the first time since this well has been sampled is below the PQL. The MNA data indicates there is limited evidence for anaerobic biodegradation.

Building 10

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 2015. 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 Building 10.

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 downgradient well MW-10-2 within the Building 10 area. This is indicative that intrinsic reductive dechlorination is occurring down-gradient of Building 10.

Groundwater at 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 2015 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 and 2015 *Cis*-DCE and VC were below PQLs, 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 2015 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 Site and results have generally been below PQLs and Class GA criteria.

Bldg 10-MW-1: The PCE and TCE concentrations detected in the May 2015 sampling event are nearly unchanged since the 2014 sampling event. The *cis*-DCE and VC results were below PQLs in 2012 through 2015 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 2015 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 slight decrease in concentrations for May 2015 as compared to 2014 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.

Results and Conclusions of the PDB Pilot Study

Table 2 provides a comparison of the analytical results of the samples collected by both the traditional purge and sample method and the PDB collection method. Comparison of the percent difference of total COC concentrations between the two collection methods shows a percent difference ranging between 40 and 72% between the two collection methods. When averaged for all five wells tested the overall percent difference is 62%. As specified in the Pilot Study Scope of Work, if a difference of 10% or less was obtained then further consideration of PDB use would be pursued. Because the desired level of comparability (≤

10 % difference) was not achieved, the use of PDBs in future groundwater monitoring events will not be considered at this time.

GROUNDWATER MONITORING 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 DHTS Site easement area and Mahle property. 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 beyond Upper Mountain Road as the monitoring wells along the Upper Mountain Road 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 wells, MW-12 and MW-13, from the Delphi Site, do 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.

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 Upper Mountain Road.

RECOMMENDATIONS

At the time of writing this Groundwater Sampling Report, the Remedial Work Plan for the BCP Site is in public review for a period ending on September 14, 2015. Once approved by the Department, a Decision Document will be issued by the Department which obligates GMCH to implement the Site remedy. The Site remedy includes in-situ application of chemical reducing agents to destroy the mass of the COC in the soil and bedrock matrix, reduce the volume of impacted groundwater, and enhance the biological degradation of the COC dissolved in downgradient groundwater. The in-situ chemical reducing (ISCR) agent will include enhanced zero valent iron which is comprised of a mixture of zero valent iron (ZVI) and an emulsified organic carbon substrate. The installation of pilot wells and remedial injection wells and the implementation of a remedial pilot study and the actual remedial injections is scheduled during the fall of 2015. Post-injection groundwater monitoring will be completed after in-situ groundwater treatment, prior to the 2016 site-wide groundwater monitoring program.

GZA recommends:

1) Continuing the annual groundwater sampling event to include the same 25 wells sampled in 2015 using the methodologies outlined in the Delphi Site SMP, in the spring of 2016.

2) Sample collection under the annual groundwater monitoring program be performed in general conformance to the USEPA Region I Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (EQASOP-GW 001 Revised January 19, 2010). To date, this method has been followed but with the additional procedure of collecting the samples only after a minimum of one well volume has been purged.

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

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

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

Bart A. Klettke, P.E.
Principal

Table 1 – Summary of Groundwater Sample Analytical Results
Table 2 – Passive Diffusion Bags Pilot Study Results
Figure 1 – Site Plan
Figure 2 – May 2015 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
Appendix E: Table E-1 Well Condition Survey

Attachment A: Test America Analytical Laboratory Reports

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 5/11/2015	Q	MW-7-2 5/12/2015	Q	MW-7-3 5/11/2015	Q	MW-7-4 5/11/2015	Q	MW-7-5 5/18/2015	Q	MW-7-6 5/15/2015	Q	MW-7-7 5/12/2015	Q	MW-7-8 5/18.2015	Q	MW-7-A-6 5/18/2015	Q	MW-7-C-2 5/15/2015	Q	MW-7-P-1 5/26/2015	Q
VOC Compounds of Concern (ug/L)																							
cis-1,2-Dichloroethene	5	<0.81		<0.81		<8.1		<0.81		460		440		13,000		790		28,000		390		2	
Tetrachloroethene	5	<0.36		<0.36		<3.6		<0.36		5,400		430		70,000		140		120,000		<1.8		<0.36	
trans-1,2-dichloroethene	5	<0.90		<0.90		<9.0		<0.90		<90		<9		<900		3.8	J	<4500		<4.5		2.3	
Trichloroethene	5	<0.46		<0.46		<4.6		<0.46		580		240		3,900		43		19,000		<2.3		0.93	J
Vinyl Chloride	2	<0.90		<0.90		50		<0.90		<90		40		3,500		32		<4500		36		7.4	
Total VOCs	2	0		0		50.0		0		6,440		1,150		90,400		1008.8		167,000		426		12.63	
Field Parameters																							
Temperature (Deg. C)	NV	15.5		13.5		16.6		10.2		16.2		15.2		13.5		15.30		18.9		13.4		22.1	
Specific Conductance (mS/cm)	NV	5.372		0.812		23.15		1.481		12.973		13.162		8.117		9.825		3.826		2.317		20.323	
Dissolved Oxygen (mg/L)	NV	0.12		0.35		0.01		2.36		0.1		0.11		0		0.02		0.002		0.05		0.15	
Oxygen Reduction Potential (mv)	NV	20.4		139.2		-90		75.3		58.8		16.2		-314.2		-203.6		-4.1		-67.7		-129.4	
pH (std. units)	NV	6.88		7.22		6.66		7.35		6.62		6.92		7.78		6.87		6.81		6.96		6.27	
Turbidity (NTUs)	NV	4.1		8.6		12.7		1.3		3.9		1.3		6.3		12		3.9		0.9		4	
Inorganics (mg/L)																							
Iron	0.3	0.071	B	0.03	J B ^	3.4	B	0.19	B	0.13		0.092		0.11		18.5		0.28		0.4		72.9	
Magnesium	35 [Note 4]	106		30.2		234		30.2		142		85.9		169		230		124		111		457	
Manganese	NV	0.34	B	0.0058	B	0.35	B	0.0053	B	1.1		0.19		0.024	B	0.45	B	1.1		0.19		9.1	
Miscellaneous Water Quality Parameters																							
Methane (ug/L)	NV	6.1		<1.0		100		<1.0		3	J	36		340		46		400		68		6,300	
Ethane (ug/L)	NV	<1.5		<1.5		<15		<1.5		<1.5		1.8	J	18	J	1.6	J	11		<1.5		54	
Ethene (ug/L)	NV	<1.5		<1.5		<15		<1.5		<1.5		<1.5		290		14		79		<1.5		<1.5	
Carbon Dioxide (ug/L)	NV	14,000		6,300		17,000		6,200		20,000		8,800		<1,000		6,400		21,000		9,000		32,000	
Total Organic Carbon (mg/L)	NV	1.6		1.5		1.7	F1	1.2	B	3.4	B	2.2		14.3	B	1.5	B	10.2	B	1.7	J	6.7	B
Alkalinity (mg/L)	NV	329	B	305	B	328	B	334	B	357		337	B	228	B	84.0	B	451		294	B	213	B
Ammonia (mg/L)	NV	<0.0090		<0.0090	F1	2.8		<0.0090		<0.0090	J	0.092		0.20		0.12		0.074		0.48		132	
Chloride (mg/L)	NV	1,630		90		8,280		251		4,430		4,620		2,430		3,550		937		246		4,730	
Nitrate (mg/L)	NV	0.028	J	<0.020		0.026	J	0.058		2.00		<0.020		0.083		<0.020		<0.020		<0.020		<0.020	
Nitrite (mg/L)	NV	<0.020		<0.020		<0.020		<0.020		0.045	J	<0.020		0.067		<0.020		<0.020		<0.020		<0.020	
Sulfate (mg/L)	NV	124		25.5		776		39	J	285	J	100	J	297		270		69.4		639		<69.8	
Sulfide (mg/L)	NV	<0.052		<0.052		0.095	J	<0.052	F1	<0.052		<0.052		1.9		<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. F1 = MS and/or MSD Recovery is outside acceptance limits. F2 = MS/MSD RPD exceeds control limits.
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																							
		MW-6-1 5/13/2015	Q	MW-6-2 5/14/2015	Q	MW-6-F-8 5/14/2015	Q	MW-8-1 5/22/2015	Q	MW-8-2 5/22/2015	Q	MW-8-3 5/21/2015	Q	MW-8-4 5/12/2015	Q	MW-8-003-B 5/14/2015	Q	MW-9-101A 5/21/2015	Q	MW-9-12 5/21/2015	Q	TK-6 5/20/2015	Q	BLDG-10-MW-1 5/26/2015	Q	MW-10-2 5/19/2015	Q	MW-10-3 5/20/2015	Q
VOC Compounds of Concern (ug/L)																											
cis-1,2-Dichloroethene	5	<0.81		<0.81		<0.81		<0.81	J	1,600		1.8		42		12		<0.81	F2	<0.81		<0.81		<1,600		1,300		10	
Tetrachloroethene	5	<0.36		<0.36		<0.36		<0.36		10	J	<0.36		<1.8		83		<0.36	F1	<0.36		<0.36		120,000		150		13	
trans-1,2-dichloroethene	5	<0.90		<0.90		<0.90		<0.90		<23		<0.9		<4.5		<1.8		<0.90	F2	<0.90		<0.90		<1,800		18	J	<0.9	
Trichloroethene	5	<0.46		<0.46		<0.46		<0.46		24	J	<0.46		6.2		10		<0.46	F2	<0.46		<0.46		2,600		140		7.2	
Vinyl Chloride	2	<0.90		<0.90		<0.90		<0.90		<23		<0.9		24		<1.8		<0.90		<0.90		<0.90		<1,800		38		<0.9	
Total VOCs	2	0		0		0		0		1,634		1.8		72.2		105		0		0		0		122,600		1,646		30.2	
Field Parameters																											
Temperature (Deg. C)	NV	11.6		12.7		13.1		14.3		18.4		20		15		14.2		13.6		13.3		12.9		19.9		15.6		10.5	
Specific Conductance (mS/cm)	NV	3.354		6.407		9.547		5.615		1.979		6.555		15.391		2.992		9.017		3.347		3.405		2.47		6.576		1.774	
Dissolved Oxygen (mg/L)	NV	0.08		0.11		0.15		0.05		0.07		1.75		0.48		0.72		2.43		0.17		2.33		0.37		0.05		1.01	
Oxygen Reduction Potential (mv)	NV	-116.3		132.3		210.5		-206.3		-128.3		-63.5		-71.6		144.2		221.8		213.3		124.6		-76.3		-97.4		85.4	
pH (std. units)	NV	6.84		6.88		6.8		6.83		7.18		6.86		7.04		8.21		7.06		7.22		7.3		7.06		7.11		7.53	
Turbidity (NTUs)	NV	7.3		0.6		0.4		4		0.6		5		3.3		6.4		0.4		2.2		3.3		0.6		5.1		0.7	
Inorganics (mg/L)																											
Iron	0.3	12.3		0.036	J	<0.019		0.04	J	0.065		1.0		2.4	B ^	0.65		<0.019		0.028	J	<0.019		1.2		0.055		<0.019	
Magnesium	35 [Note 4]	48.3		56.3		195		102		36.9		61.0		124		4.5		113		30.8		32.7		95.6		710		31.1	
Manganese	NV	1.8		0.21		0.24		0.12		0.0046		4.1		1.1	B	0.056		0.0014	J	0.17		<0.00040		0.44		0.10	B	<0.00040	
Miscellaneous Water Quality Parameters																											
Methane (ug/L)	NV	8		<1.0		7		370		3	J	23		80		<1.0		<1.0		<1.0		<1.0		13		32		<1.0	
Ethane (ug/L)	NV	<1.5		<1.5		<1.5		41	J	<1.5		<15		<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		45	J	<1.5		<15		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5	
Carbon Dioxide (ug/L)	NV	22,000		14,000		15,000		13,000		3,700		8,500		3,700		<1000		4,100		4,900		6,200		17,000		6,900		1,400	
Total Organic Carbon (mg/L)	NV	3.7		2.3		1.4		1.30	B	2	B	7.7	B	2		2.9		3.5	B	1.9	B	1.4	B	4.2	B	1.9	B	1.9	B
Alkalinity (mg/L)	NV	399		399	B	364	B	288	B	345	B	318	B	159	B	163	B	182		225		346	B	303	B	348	B	138	B
Ammonia (mg/L)	NV	0.48		0.13		0.015		1.2		0.092		1.8		0.14		0.045		<0.0090	F1	<0.0090		247		0.13		0.38		<0.0090	
Chloride (mg/L)	NV	869		1,800		2,930		1,430		361		1,930		5,670		775		2,620		908		765		501		1,940		341	
Nitrate (mg/L)	NV	<0.020		0.090		0.17		<0.020		0.46		0.14		0.022	J	0.23		3.9		0.082		0.86		<0.020		0.034	J	1.7	
Nitrite (mg/L)	NV	<0.020		<0.020		<0.020		<0.020		0.052		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		0.025	J B
Sulfate (mg/L)	NV	18.2	J	91.1	J	280		531		177		27.8	J	459		71.1	J	981		64.0	J	247		215		210		203	
Sulfide (mg/L)	NV	<0.052		<0.052		<0.052		2.6	J	<0.052		<0.052		<0.052		<0.052		<0.052	F1	<0.052		<0.052		<0.052		<0.052		<0.052	

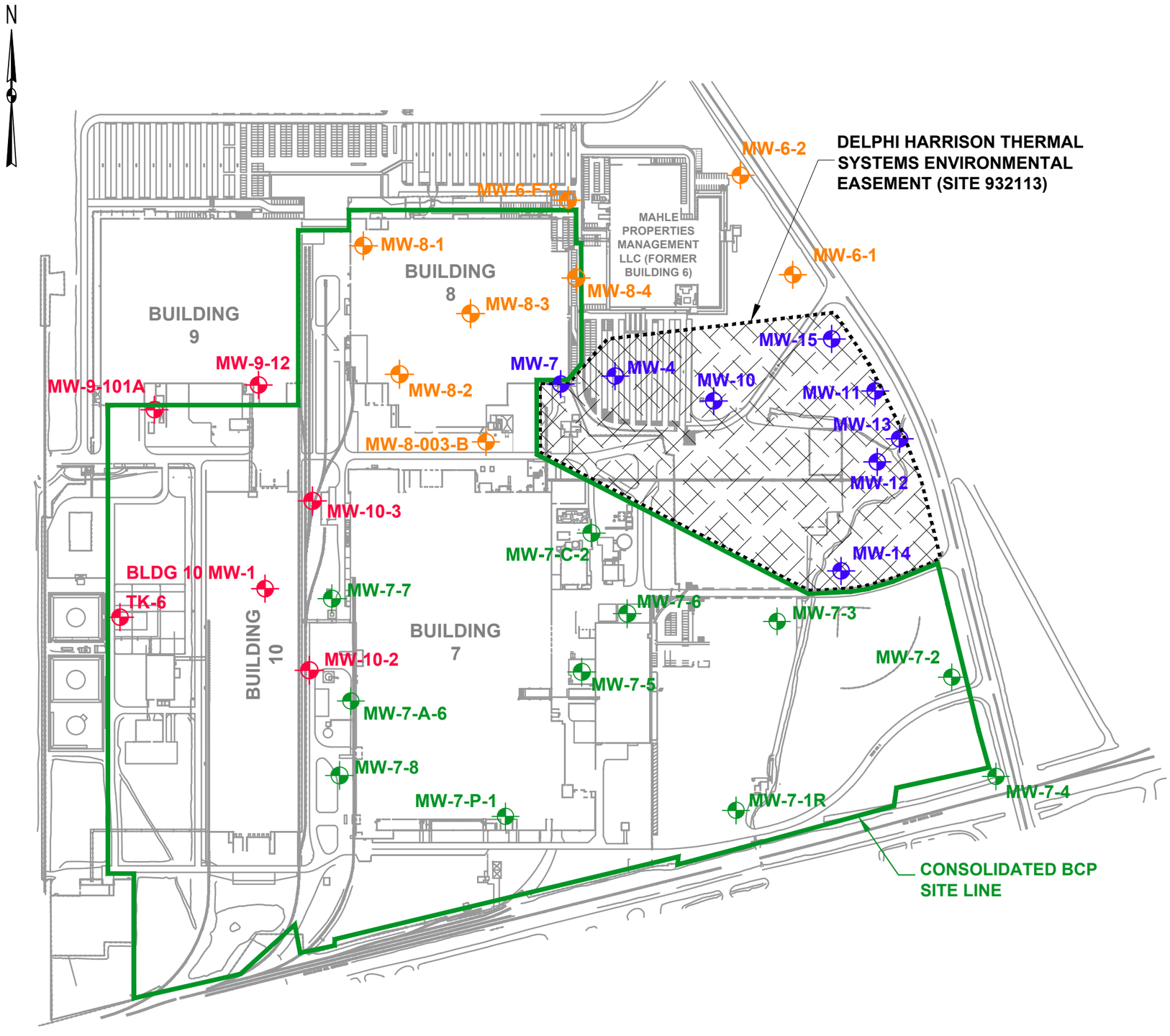
Notes:
1. Only compounds detected in one or more of the groundwater samples are presented in this table.
2. "<" indicates compound was not detected above the method detection limit.
3. Analytical testing completed by TestAmerica.
4. Criteria is a guidance value.
5. Laboratory qualifiers: B = compound 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. F1 = MS and/or MSD Recovery is outside acceptance limits. F2 = MS/MSD RPD exceeds control limits.
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 2
Passive Diffusion Bag Pilot Study Results
GMCH Lockport Site
Buildings 7, 8 10
Site No. C932138

	BUILDING 7 AREA WELLS													BUILDING 8 AREA WELLS					BUILDING 10 AREA WELLS				
Sample Location	MW-7-3					MW-7-6					MW-7-P-1					MW-8-4					MW-10-3				
Sample Date	5/11/2015					5/15/2015					5/26/2015					5/12/2015					5/20/2015				
Sampling Method	Low Flow	Q	Passive Diffusion	Q	% Difference	Low Flow	Q	Passive Diffusion	Q	% Difference	Low Flow	Q	Passive Diffusion	Q	% Difference	Low Flow	Q	Passive Diffusion	Q	% Difference	Low Flow	Q	Passive Diffusion	Q	% Difference
VOC Compounds of Concern (ug/L)																									
cis-1,2-Dichloroethene	<8.1		3.2		86.7	440		600	F1	30.8	2		<1.0		66.7	42		87		69.8	10		5.0		66.7
Tetrachloroethene	<3.6		<1.0		113.0	430		720	F1	50.4	<0.36		<1.5		122.6	<1.8		<1.0		57.1	13		4.2		102.3
trans-1,2-dichloroethene	<9.0		<1.0		160.0	<9		<10		10.5	2.3		2.2		4.4	<4.5		1.1		121.4	<0.9		<1.0		10.5
Trichloroethene	<4.6		<1.0		128.6	240		350		37.3	0.93	J	<1.0		7.3	6.2		12		63.7	7.2		4.4		48.3
Vinyl Chloride	50		30		50.0	40		62		43.1	7.4		1.1		148.2	24		66		93.3	<0.9		<1.0		10.5
Total VOCs	75.3		36.2		70.1	1,159		1,742		40.2	12.99		6.8		62.6	78.5		167.1		72.1	31.1		15.6		66.4

Notes:
1. "<" indicates compound was not detected above the reporting limit.
2. For non-detects, the compound was considered to be detected at the reporting limit for the purposes of calculating total VOCs and percent difference.
3. Analytical testing completed by TestAmerica.
4. Laboratory qualifiers: J = approximate value, the result is < RL but > or = to MDL, F1 = MS and/or MSD Recovery is outside acceptance limits.
5. ug/L = parts per billion

FIGURES



LEGEND:

- MW-11 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITHIN THE DELPHI HARRISON THERMAL SYSTEMS SITE SAMPLED MAY 2015
- 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.

0 200 400 800

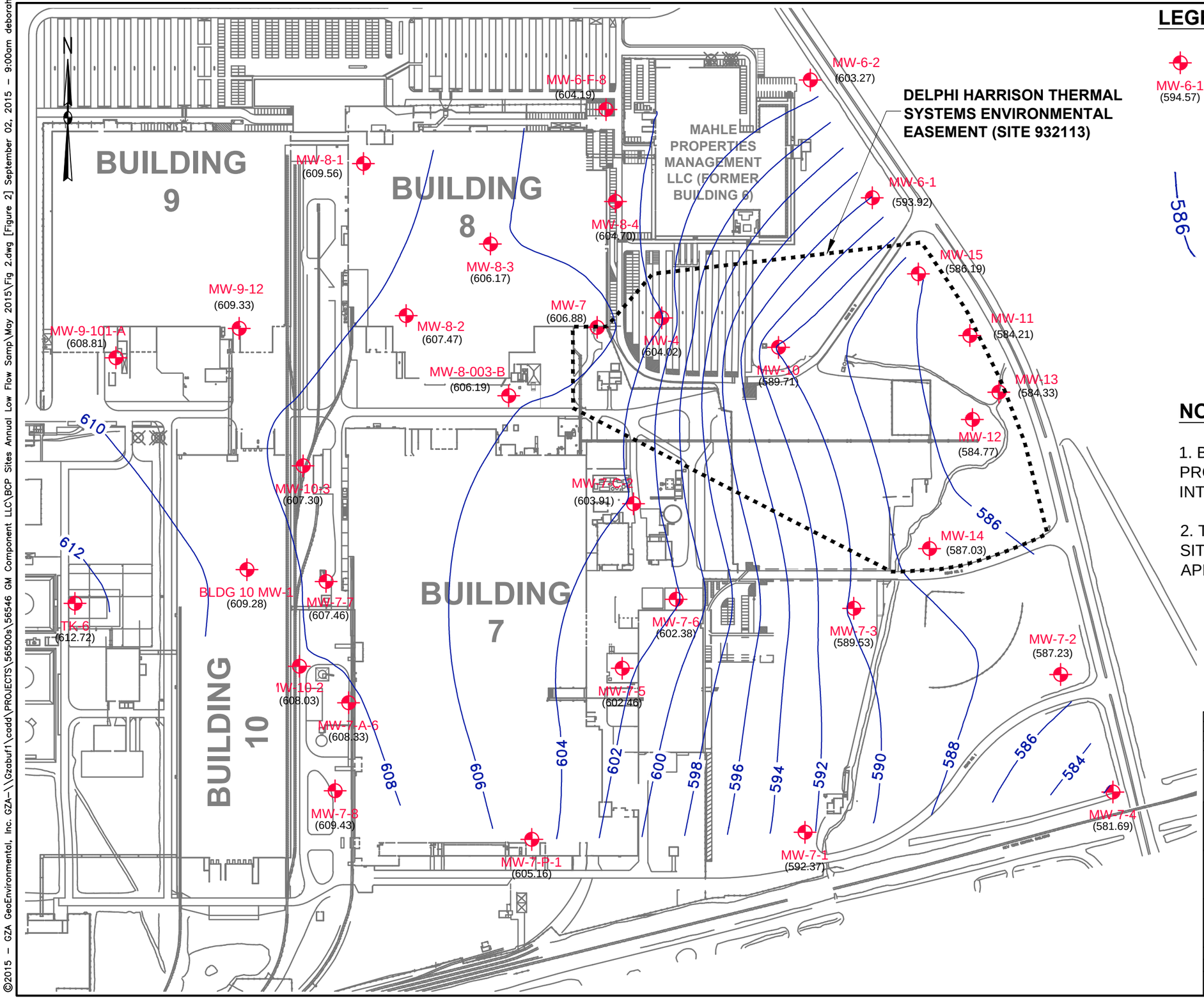
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

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 1
DESIGNED BY: RJS/DL	DRAWN BY: RJS	SCALE: SHOWN	
DATE: AUGUST 2015	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 2015 WITH GROUNDWATER ELEVATION (FEET) MEASURED ON MAY 5, 2015.

586 — GROUNDWATER CONTOUR (FEET) PLOTTED BASED UPON MAY 5, 2015 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.

0 150 300 600
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

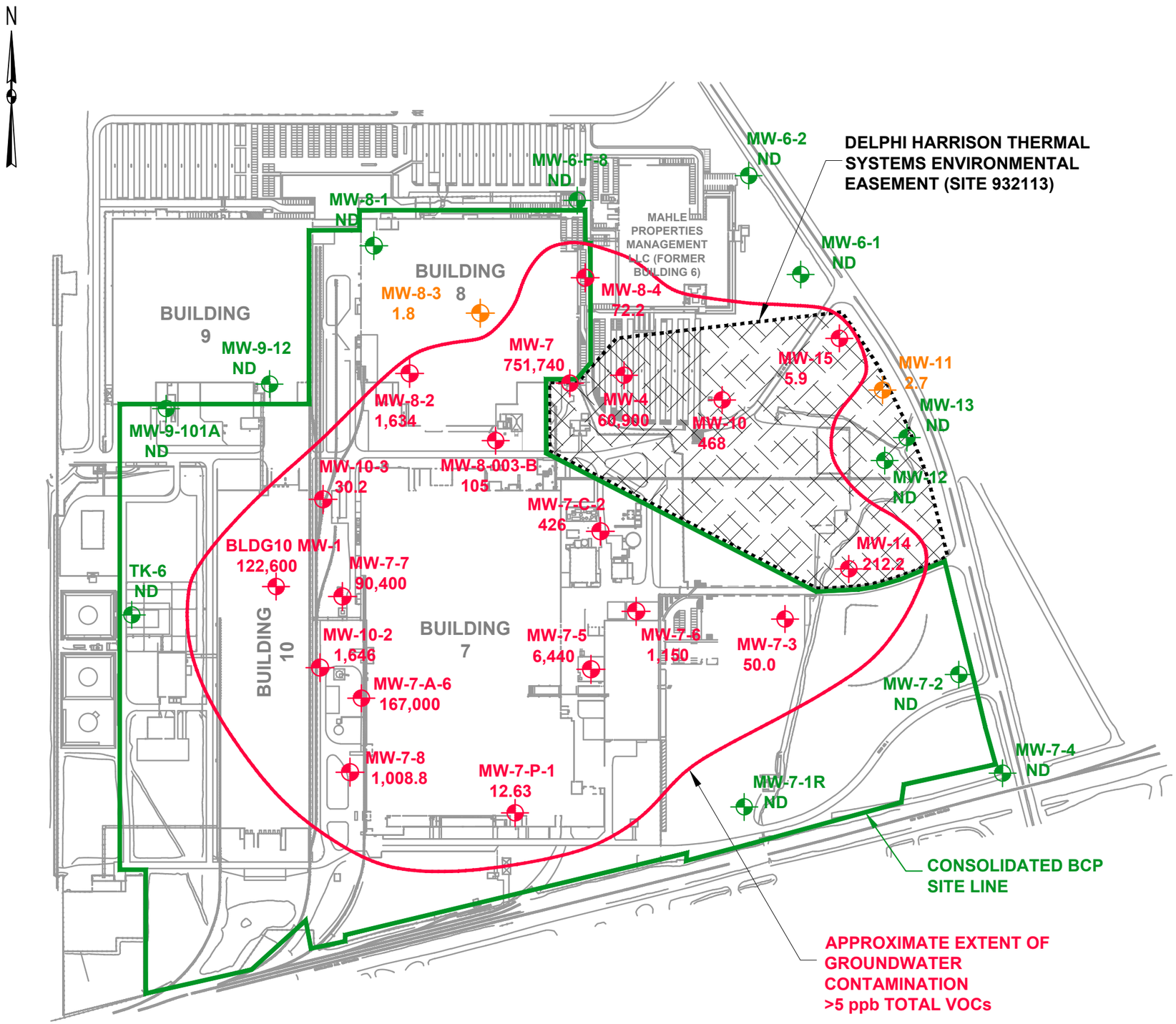
GM COMPONENTS HOLDINGS, LLC
LOCKPORT, NEW YORK FACILITY

SITEWIDE
GROUNDWATER CONTOUR MAP

PREPARED BY:
GZA GeoEnvironmental of N.Y.
Engineers and Scientists
www.gza.com

PREPARED FOR:
GMCH LOCKPORT FACILTY
200 UPPER MOUNTAIN ROAD
LOCKPORT, NEW YORK

PROJ MGR: JR	REVIEWED BY: TB	CHECKED BY: BAK	FIGURE NO. 2
DESIGNED BY: RJS	DRAWN BY: RJS	SCALE: SHOWN	
DATE: AUGUST 2015	PROJECT NO. 56546	REVISION NO.	SHEET NO. 2 OF 3



LEGEND:

- MW-6-2 ND — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITH NON-DETECT LEVELS FOR CHLORINATED SOLVENTS DURING MAY 2015 SAMPLING
- MW-11 2.7 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITH CHLORINATED SOLVENT LEVELS MEASURING LESS THAN 5 PARTS PER BILLION (ppb)
- MW-15 5.9 — 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.

0 200 400 800
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

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 3
DESIGNED BY: RJS	DRAWN BY: RJS/DL	SCALE: SHOWN	
DATE: AUGUST 2015	PROJECT NO. 56546	REVISION NO.	SHEET NO. 3 OF 3

APPENDIX A

MONITORING WELL OBSERVATIONS & GROUNDWATER SAMPLING LOGS

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: GMCH BCP SITE — PROJECT NO.: 56546

SAMPLING CREW MEMBERS: D. WOLF — SUPERVISOR: T. BOLLER

DATE OF SAMPLE COLLECTION: 5/11/15 - 5/26/15

[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-7-3 051115	MW-7-3	594.04	24.98	3.50	590.54	3.5		3.9	6.66	16.0	23,199	1230	VOC MNA
MW-7-1 051115	MW-7-1	597.67	22.50	4.59	593.08	2.9		3.0	6.88	15.5	5,372	1545	VOC MNA
MW-7-2 051215	MW-7-2	592.57	21.84	5.73	586.84	2.6		2.8	7.22	13.5	0.812	1105	VOC MNA
MW-7-4 051215	MW-7-4	593.53	21.26	11.84	581.69	1.5		1.3	7.35	10.2	1.148	1130	VOC MNA
MW-7-C-2 051515	MW-7-C-2	609.42	24.08	5.51	603.91	3.0		3.2	6.96	13.4	2,317	1110	VOC MNA
MW-7-6 051515	MW-7-6	606.30	16.53	3.94	602.36	2.0		2.2	6.92	15.2	13,162	1510	VOC MNA
MW-7-5 051815	MW-7-5	610.96	21.98	8.42	602.54	2.1		2.3	6.62	16.2	12,973	1035	VOC MNA
MW-7-A-6 051815	MW-7-A-6	–	14.08	2.39	–	1.9		2.1	6.81	18.9	3,826	1415	VOC MNA

Additional Comments:

Copies to:

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: GMCH BCP SITE — PROJECT NO.: 56546

SAMPLING CREW MEMBERS: D. WOLF — SUPERVISOR: T. BOWLOW

DATE OF SAMPLE COLLECTION: 5/11/15 - 5/26/15

[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-7-8 051915	MW-7-8	610.92	19.41	1.43	609.49	2.9		3.0	6.87	15.3	9.825	1450	VOC MNA
MW-7-7 051915	MW-7-7	610.24	18.80	2.72	607.52	2.6		2.8	7.78	13.5	8.107	1120	VOC MNA
MW-7-P-1 052615	MW-7-P-1	615.09	19.89	10.16	604.93	1.6		1.9	6.27	22.1	2.327	1050	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: GMC1+ BCP SITE
Ref. No.: 56546

Date: 5/11/15
Personnel: D. WULF

Monitoring Well Data:

Well No.: MW-7-1
Measurement Point: TOR
Constructed Well Depth (ft): 23.7
Measured Well Depth (ft): 22.50
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]: 2.9 GAL
Initial Depth to Water (ft): 4.59

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]
1245		4.94	0.35	6.95	17.6	5.361	40.8	1.05	1.9	0	0
1315		5.34	0.75	6.90	15.3	5.434	59.2	0.12	3.5	.5	0
1345		5.34	0.75	6.89	15.4	5.360	31.8	0.10	4.0	1.25	0
1415		5.34	0.75	6.88	15.4	5.370	27.0	0.07	4.2	1.6	0
1445		5.34	0.75	6.89	15.7	5.387	24.7	0.12	4.9	2.1	0
1515		5.34	0.75	6.88	15.8	5.379	20.9	0.13	4.1	2.6	0
1530		5.34	0.75	6.87	15.7	5.372	20.1	0.11	3.8	2.8	0
1535		5.34	0.75	6.88	15.6	5.373	20.3	0.13	4.0	2.9	1
1540		5.34	0.75	6.88	15.5	5.372	20.4	0.12	4.1	3.0	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR= 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565416.00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-7-1

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (LITERS/GALLONS)	PURGE VOLUME PUMPED (LITERS/GALLONS)
05/11/15	05/11/15	2.9	30

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT: DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE		A. SUBMERSIBLE PUMP; B. PERISTALTIC PUMP; C. PERISTALTIC PUMP; D. BAILER; E. PEristaltic PUMP; F. WATERRAS		N= PURGING OTHER (SPECIFY)
SAMPLING DEVICE		G. BLADDER PUMP; H. BAILER; I. PEristaltic PUMP		N= SAMPLING OTHER SPECIFY
PURGING DEVICE		A. TEFLON; B. STAINLESS STEEL; C. POLYETHYLENE		N= PURGING OTHER SPECIFY
SAMPLING DEVICE		D. POLYPROPYLENE		N= SAMPLING OTHER SPECIFY
PURGING DEVICE		A. TEFLON; B. STAINLESS STEEL; C. POLYETHYLENE	D. POLYPROPYLENE; E. SILICONE; F. COMBINATION TEFLON/POLYPROPYLENE	N= PURGING OTHER SPECIFY
SAMPLING DEVICE		A. PUMP; N= (SPECIFY)		N= SAMPLING OTHER SPECIFY
FILTERING DEVICES 0.45		A. IN-LINE DISPOSABLE; B. PRESSURE; C. VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION	1519.67 (msl ft)	GROUNDWATER ELEVATION	1513.08 (msl ft)
DEPTH TO WATER	14.59 (bmp ft)	WELL DEPTH	22.50 (bmp ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/L)	(°C)
(std)	(NTU)	(µmhos/cm) AT 25°C	(mV)	(mg/L)	(°C)
(std)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/L)	(°C)
(std)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/L)	(°C)
(std)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: NONE; COLOR: CLEAR; COLOR: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5; WIND DIR: SW; PRECIPITATION (Y/N): 0; WEATHER: SUNNY

SPECIFIC COMMENTS:

IF NOT, THEN SAMPLES WERE COLLECTED IN ACCORDANCE WITH APPROVED COMPOSITE SAMPLING PLAN

5/11/15 DATE; DANIEL WOLF PRINT; SIGNATURE

FAILURE TO OBTAIN SAMPLES AS SPECIFIED MAY RESULT IN A REVISION REQUEST BEING ISSUED BY THE TRUSTEE AND/OR

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BASE SITE
Ref. No.: 56546

Date: 5/12/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-7-2
Measurement Point: TOR
Constructed Well Depth (ft): 20'
Measured Well Depth (ft): 21.84
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 (mL)[2]: 2.6
Initial Depth to Water (ft): 5.73

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]
0753		6.67	0.94	7.05	12.8	0.776	166.2	1.55	0.7	0	0
0823		6.70	0.97	7.23	12.9	0.775	177.1	0.75	11.0	0.5	0
0853		7.29	1.56	7.24	12.7	0.779	173.4	0.49	9.2	0.9	0
0923		8.29	2.56	7.23	13.2	0.782	157.9	0.34	10.0	1.3	0
0953		8.30	2.57	7.22	13.8	0.796	149.5	0.32	9.0	1.8	0
1023		8.30	2.57	7.21	13.3	0.802	147.7	0.30	9.3	2.2	0
1053		8.30	2.57	7.20	13.5	0.810	140.6	0.32	9.0	2.6	1
1658		8.30	2.57	7.21	13.5	0.808	139.2	0.33	8.8	2.7	1
1103		8.30	2.57	7.22	13.5	0.812	139.7	0.35	8.6	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565416 - 00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-17-12

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITERS/GALLONS)	PURGE PUMP SETTING (FEET BGS)
05/12/15	05/12/15	7.6	7.9

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT (CIRCLE ONE): 6

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE): (Y) N

PURGING DEVICE	B	A - SUBMERSIBLE PUMP (GRUNDFOS)	D - TWO CHECK PUMP	G - OTHER:
		B - PERISTALTIC PUMP	E - PISTON PUMP	H - WATERRAS
SAMPLING DEVICE	B	A - SUBMERSIBLE PUMP	B - PERISTALTIC PUMP	
PURGING DEVICE	B	A - BAILER	C - DISPOSABLE	
		B - STAINLESS STEEL	D - OTHER (SPECIFY)	
SAMPLING DEVICE	B	A - BAILER	C - DISPOSABLE	
PURGING DEVICE	B	A - TEFLON	D - POLYETHYLENE	F - SILICONE
		B - TYGON	E - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE
SAMPLING DEVICE	B	A - TEFLON	W -	
FILTERING DEVICES 0.45		A - INLINE DISPOSABLE	B - PRESSURE	C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	59257 (ft. MSL)	GROUNDWATER ELEVATION	58684 (ft/MSL)
DEPTH TO WATER	573 (ft. BTOC)	WELL DEPTH	2184 (ft/BTOC)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(ntu)	(umhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(umhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(umhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(umhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(umhos/cm AT 25°C)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

WEATHER CONDITIONS: GOOD TEMP: HOT WIND: CLEAR PRECIP: CLEAR

WELL CONDITIONS: VOC: D-15 LOCK: SW PROTECTIVE CASING: O PID: P CLOUDY

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLES WERE COLLECTED & ANALYZED AS PER APPLICABLE PROTOCOL

5/12/15 DATE DANIEL WOLF SIGNATURE

FIELD MODIFICATIONS MUST BE APPROVED BY A REVISION REQUEST FORM AND BE DOCUMENTED IN THE PROJECT LOGBOOK

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 565466

Date: 5/11/15
Personnel: DWJLF

Monitoring Well Data:

Well No.: MW-7-3
Measurement Point: TOR
Constructed Well Depth (ft): 25
Measured Well Depth (ft): 24.98
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 ~~(mL)~~[2]: 3.5
Initial Depth to Water (ft): 3.50

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]
0841		4.09	0.59	6.46	15.0	18.142	130.3	1.25	2.0	0	0
0911		6.08	2.58	6.51	14.6	18.119	101.4	0.15	13.1	.5	0
0941		6.98	3.48	6.60	15.2	18.092	81.1	0.16	15.2	1.0	0
1011		7.46	3.96	6.63	15.8	18.064	48.9	0.05	12.3	1.5	0
1041		7.46	3.96	6.66	16.3	18.078	-86.5	0.03	13.7	2.0	0
1111		7.46	3.96	6.66	15.1	22.479	-90.7	0.02	12.6	2.6	0
1141		7.46	3.96	6.66	16.0	23488	-91.2	0.01	13.1	3.2	0
1211		7.46	3.96	6.66	15.9	23.216	-90.5	0.01	12.9	3.7	1
1216		7.46	3.96	6.65	15.9	23.362	-90.7	0.02	12.5	3.8	1
1221		7.46	3.96	6.64	16.0	23.149	-90.0	0.01	12.7	3.9	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. $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM PTOR=

WELL PURGING FIELD INFORMATION FORM

JOB# 565446

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-7-3

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITRES/GALLONS)	PURGE PUMP FLOW RATE (LPM)
05/11/15	05/11/15	3.5	3.9

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED? O (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED? O (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - OTHER	X= PURGING OTHER SPECIFY
		B - PERISTALTIC PUMP	E - PEAK PUMP	H - WATERRAS	
SAMPLING DEVICE	B	B - BAILER PUMP	F - BLADDER BOTTLE		X= SAMPLING OTHER SPECIFY
PURGING DEVICE	E	A - SUBMERSIBLE PUMP	D - BAILER		X= PURGING OTHER SPECIFY
		B - PERISTALTIC PUMP	E - POLYETHYLENE		
SAMPLING DEVICE	E	C - PERISTALTIC PUMP			X= SAMPLING OTHER SPECIFY
PURGING DEVICE	E	A - TEFLON	D - POLYPROPYLENE	G - SILICONE	X= PURGING OTHER SPECIFY
		B - PVC	E - POLYETHYLENE	H - COMBINATION TEFLON/POLYPROPYLENE	
SAMPLING DEVICE	E	C - PVC	X= (SPECIFY)		X= SAMPLING OTHER SPECIFY
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION	594.04 (mOD)	GROUNDWATER ELEVATION	590.54 (mOD)
DEPTH TO WATER	3.50 (mBTOC)	WELL DEPTH	12.43 (mBTOC)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(pH)	(NTU)	(µS/cm)	(mV)	(mg/L)	(°C)
(pH)	(NTU)	(µS/cm)	(mV)	(mg/L)	(°C)
(pH)	(NTU)	(µS/cm)	(mV)	(mg/L)	(°C)
(pH)	(NTU)	(µS/cm)	(mV)	(mg/L)	(°C)
(pH)	(NTU)	(µS/cm)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOUR: NONE COLOUR: CLEAR CLARITY: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION (MM): 0 SURVEY

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLES WERE COLLECTED AS OUTLINED IN THIS APPENDIX AND ARE CORRECT.

5/11/15 DANIEL WAF

DATE SIGNATURE

SAMPLE MODIFICATIONS MUST BE AUTHORIZED BY A REVISION REQUEST FORM AND APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/11/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-7-4
Measurement Point: TOR
Constructed Well Depth (ft): 19
Measured Well Depth (ft): 21.26
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]: 1.5 GAL
Initial Depth to Water (ft): 11.84

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]
1550		12.50		7.39	12.0	1.533	72.2	2.39	1.1	0	0
1553		13.12		7.34	11.2	1.471	78.2	1.41	1.0	.25	0
1556		14.18		7.35	10.2	1.448	77.1	1.52	1.2	.5	0
1559		15.79		7.36	9.8	1.499	76.3	2.21	1.4	1.0	0
1602	DRY	17.0		7.35	10.2	1.481	75.3	2.36	1.3	1.25	6
1116		12.32	SAMPLED @			11:30					

5/11
5/12

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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged = Vp/Vs.

OVM @ TOR = 0.0

WELL PURGING FIELD INFORMATION FORM

JOB# 565460-00

SITE/PROJECT NAME: _____

WELL# MW-7-14

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITERS/GALLONS)	TOTAL VOLUME PURGED (LITERS/GALLONS)
05/12/15	05/12/15	1.5	1.3

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE) O N

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE) O N

PURGING DEVICE	B	B = BLADDER PUMP; E = ELECTRIC SUBMERSIBLE PUMP; P = PERISTALTIC PUMP; S = SUCTION LIFT PUMP; T = TEFLON BAILER; W = WATERRA®		
SAMPLING DEVICE	B	B = BLADDER PUMP; E = ELECTRIC SUBMERSIBLE PUMP; T = TEFLON BAILER		
PURGING DEVICE	E	B = BAILER; E = ELECTRIC SUBMERSIBLE PUMP; P = PERISTALTIC PUMP; S = SUCTION LIFT PUMP		
SAMPLING DEVICE	E	E = ELECTRIC SUBMERSIBLE PUMP; P = PERISTALTIC PUMP; S = SUCTION LIFT PUMP		
PURGING DEVICE	E	B = BAILER; E = ELECTRIC SUBMERSIBLE PUMP; P = PERISTALTIC PUMP; S = SUCTION LIFT PUMP; T = TEFLON; TS = TEFLON/SILICONE; V = VITON; X = OTHER (SPECIFY)		
SAMPLING DEVICE	E	B = BAILER; E = ELECTRIC SUBMERSIBLE PUMP; P = PERISTALTIC PUMP; S = SUCTION LIFT PUMP; T = TEFLON; TS = TEFLON/SILICONE; V = VITON; X = OTHER (SPECIFY)		
FILTERING DEVICE 0.45		I = INLINE DISPOSABLE; P = PRESSURE; V = VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION	5913.53 (ft/m)	GROUNDWATER ELEVATION	5816.99 (ft/m)
DEPTH TO WATER	18.54 (ft/m)	WELL DEPTH	21.26 (ft/m)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE GOOD ODOR NONE COLOR CLEAR SHEEN GLOSS

WEATHER CONDITIONS WIND SPEED 0-5 WIND DIR SW PRECIPITATION 0 SKY SUNNY

SPECIFIC COMMENTS _____

5/12/15 DANIEL WOLF

SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/18/15
Personnel: DWUCF

Monitoring Well Data:

Well No.: MW-7-5
Measurement Point: TOR
Constructed Well Depth (ft): 22'
Measured Well Depth (ft): 21.98
Depth of Sediment (ft):

Screen Length (ft): 15-22 = 7'
Depth to Pump Intake (ft)[1]: 18
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 2.1
Initial Depth to Water (ft): 8.89

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]
0900		9.21	0.32	6.52	15.1	12.527	92.6	1.19	2.4	0	0
0830		9.39	0.50	6.57	15.6	12.536	71.7	0.74	8.1	0.3	0
0900		9.39	0.50	6.61	16.0	12.568	32.7	0.13	10.0	0.75	0
0930		9.39	0.50	6.62	15.7	12.576	39.7	0.11	3.9	1.25	0
1000		9.39	0.50	6.62	16.1	12.963	55.0	0.10	5.2	1.75	0
1030		9.39	0.50	6.62	16.2	12.960	56.6	0.09	4.0	2.1	1
1035		9.39	0.50	6.62	16.2	12.975	57.7	0.10	4.1	2.1	1
1040		9.39	0.50	6.62	16.2	12.973	58.8	0.10	3.9	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 516546.00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-7-5

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITRES/GALLONS)	TOTAL VOL PURGED (LITRES/GALLONS)
05/18/15	05/18/15	2.1	2.3

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - OTHER H - WATERRAM	%= PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A - SUBMERSIBLE PUMP	E - PURGE PUMP	%= SAMPLING OTHER (SPECIFY)	
PURGING DEVICE	E	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	E - PURGE PUMP F - POLYETHYLENE	%= PURGING OTHER (SPECIFY)	
SAMPLING DEVICE	E	A - SUBMERSIBLE PUMP	%= SAMPLING OTHER (SPECIFY)		
PURGING DEVICE	E	C - TEFLON D - TYGON	E - POLYETHYLENE F - POLYPROPYLENE	G - SILICONE H - COMBINATION TEFLON/POLYPROPYLENE	%= PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - TEFLON	%= SAMPLING OTHER (SPECIFY)		
FILTERING DEVICES 0.45		A - INLINE DISPOSABLE	B - PRESSURE	C - VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION	16.09 (m)	GROUNDWATER ELEVATION	16.02 (m)
DEPTH TO WATER	8.12 (m)	WELL DEPTH	21.98 (m)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(ntu)	(µmho/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmho/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmho/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmho/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmho/cm)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOUR: NONE COLOUR: CLEAR OTHER: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 WIND DIR: NE PRECIPITATION (mm): 0 PCLOUDY

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING WAS CONDUCTED IN ACCORDANCE WITH APPLICABLE SOPs

5/18/15 DANIEL WICK Daniel S. Wick

DATE SIGNATURE

FAILURE TO ADHERE TO SOPs WILL RESULT IN REJECTION OF SAMPLES AND/OR A REVISION REQUEST FORM AS DEEMED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/15/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-7-6
Measurement Point: TOR
Constructed Well Depth (ft): 16.9
Measured Well Depth (ft): 16.53
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 (mL)[2]: 2.0 GAL
Initial Depth to Water (ft): 3.94

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]
1238		4.25	0.31	7.05	13.5	10,620	100.9	2.07	1.0	0	0
1308		4.34	0.40	6.92	13.8	12,920	44.9	0.31	8.3	0.3	0
1338		4.34	0.40	6.91	14.9	13,063	29.3	0.17	10.2	0.8	0
1408		4.34	0.40	6.91	15.3	13,237	23.5	0.11	4.3	1.3	0
1438		4.34	0.40	6.92	15.6	13,270	19.0	0.09	1.8	1.8	0
1453		4.34	0.40	6.91	15.1	13,251	17.6	0.11	1.5	2.0	1
1458		4.34	0.40	6.93	15.2	13,081	16.9	0.11	1.2	2.1	1
1503		4.34	0.40	6.92	15.2	13,162	16.2	0.11	1.3	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR=0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 5 6 5 4 6 - 0 0

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-7-6

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS/GALLONS)	PURGE TEMPERATURE (DEGREES FAHRENHEIT)
05/15/15	05/15/15	2.0	22

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE	B	A - SUBMERSIBLE PUMP	D - PERISTALTIC PUMP	G - BAILER
		B - PERISTALTIC PUMP	E - PEristaltic PUMP	H - WATERRAM
SAMPLING DEVICE	B	B - BLADDER PUMP	F - DEDICATED TUBING	X - OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	D - PVC	X - OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE	
SAMPLING DEVICE	E	C - NEW POLYETHYLENE		X - OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	D - PVC / POLYBAILER	G - SILICONE
		B - VITON	E - POLYETHYLENE	C - COMBINATION TEFLON/POLYPROPYLENE
SAMPLING DEVICE	E	F - PUMP X = (SPECIFY)		X - OTHER (SPECIFY)

FILTERING DEVICES 0,15 — A - INLINE DISPOSABLE — B - PRESSURE — C - WAND

FIELD MEASUREMENTS

WELL ELEVATION (MSL)	610.630	GROUNDWATER ELEVATION (MSL)	610.316
DEPTH TO WATER (TOC)	13.914	WELL DEPTH (TOC)	16.53

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD — ODOR: NONE — COLOR: CLEAR — WEATHER CONDITIONS: WIND SPEED: 0-5 — PUMP RATE: 50 — PID/FID READING: 0 — CLOUDY

SPECIFIC COMMENTS

I ATTEST THAT SAMPLES WERE COLLECTED IN ACCORDANCE WITH SOP AS OUTLINED IN QAPP

5/15/15 — DANIEL WOLF — SIGNATURE

FAILURE TO FOLLOW SOP WILL RESULT IN NON-CONFORMANCE UNLESS APPROVED BY A REVISION REQUEST FORM AND APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 166596
Date: 5/19/17
Personnel: D. WUCE

Monitoring Well Data:

Well No.: MW-7-7
Measurement Point: TOR
Constructed Well Depth (ft): 22.7
Measured Well Depth (ft): 18.3
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 (mL)[2]: 2.6
Initial Depth to Water (ft): 2.72

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]
0810		3.49	0.77	11.31	14.0	2.467	169.7	1.72	25.1	0	0
0840		4.22	1.50	11.34	12.8	2.958	122.3	0.22	19.9	0.3	0
0910		4.78	2.06	10.17	13.0	4.584	3.9	0.14	9.3	0.75	0
0940		4.78	2.06	9.06	12.8	5.999	-71.3	0.08	9.0	1.3	0
1010		4.78	2.06	8.49	13.3	7.081	-296.3	0.03	5.3	1.8	0
1040		4.78	2.06	8.02	13.4	7.757	-302.6	0.03	6.3	2.3	0
1100		4.78	2.06	7.82	13.5	8.096	-314.2	0.01	6.2	2.6	1
1105		4.78	2.06	7.79	13.5	8.118	-315.5	0.00	6.5	2.7	1
1110		4.78	2.06	7.78	13.5	8.117	-314.2	0.00	6.4	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged = Vp/Vs.

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 5 6 5 4 6 . 8 0

SITE/PROJECT NAME: GMCH BCP SITE

WELL# M W - 7 - 7

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (GALLONS)	WATER VOL IN PUMP/TUBING (GALLONS)
05/19/15	05/19/15	26	28

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE) SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE)

PURGING DEVICE	B	B - BLADDER PUMP (DEDICATED)	D - PERI PUMP	F - FAUCET
			E - PERI PUMP	H - WATERRA
SAMPLING DEVICE	B	B - BLADDER PUMP	E - PERI PUMP	
PURGING DEVICE	E	E - PERI PUMP		
SAMPLING DEVICE	B	B - BLADDER PUMP		
PURGING DEVICE	E	E - PERI PUMP		
SAMPLING DEVICE	B	B - BLADDER PUMP		

FILTERING DEVICES 0.45

FIELD MEASUREMENTS

WELL ELEVATION	610.28 (MSL)	GROUNDWATER ELEVATION	609.52 (MSL)
DEPTH TO WATER	27.2 (BTOC)	WELL DEPTH	118.80 (BTOC)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(ntu)	(µmhos/cm @ 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µmhos/cm @ 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µmhos/cm @ 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µmhos/cm @ 25°C)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µmhos/cm @ 25°C)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: SOLVENT COLOR: CLEAR TURBIDITY: CLEAR

WEATHER: SUNNY TEMP: 70's WIND: 0-5 DIRECTION: SW PREVIOUS PRECIPITATION: cloudy

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE SOPS/PROTOCOLS

5/19/15 DAVID WOLF

DATE SIGNATURE

ENGLISH UNITS ARE USED UNLESS OTHERWISE REQUESTED BY AGENCY OR PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMC Ht BCP SITE
Ref. No.: 56546

Date: 5/18/15
Personnel: D. WILLE

Monitoring Well Data:

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

Screen Length (ft): 12.7-19.7 = 7'
Depth to Pump Intake (ft)[1]: 14
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 2.9
Initial Depth to Water (ft): 11.43

	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]
5/18	1415		2.30	0.87	7.08	18.3	9.938	-191.3	0.33	5.7	0	0
	1420		3.21		7.10	15.0	10.003	-206.7	0.12	17.2	0.3	0
	1425		4.73		7.16	13.7	9.938	-212.6	0.03	15.7	0.5	0
	1430		7.87		7.15	13.9	9.727	-217.1	0.00	13.6	1.0	0
	1435		10.73		7.09	15.2	9.915	-210.3	0.01	15.1	1.7	0
	1440		13.27		6.84	16.0	9.896	-205.7	0.03	12.2	2.3	0
	1445	DRY	14		6.87	15.3	9.825	-203.6	0.07	12.0	3.0	1
5/19												
	1440		2.75	SAMPLED	WELL	@ 1450						

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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

Pump DRY

OVM@TOR=2.7

WELL PURGING FIELD INFORMATION FORM

JOB# 565461-10

SITE/PROJECT NAME: Gmc H BCP SITE

WELL# MW-7-8

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS/GALLONS)	TOTAL VOLUME PURGED (GALLONS)
05/18/15	05/19/15	2.9	30

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED? (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED? (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	D = GAS LIFT PUMP; E = BAILER	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = SUBMERSIBLE PUMP	B = PERISTALTIC PUMP; C = BAILER	X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	B	A = TEFLON; B = TYGON; C = SILICONE; D = POLYETHYLENE		X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = TEFLON; B = TYGON; C = SILICONE; D = POLYETHYLENE; E = COMBINATION TEFLON/TYGON/SILICONE		X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	B	A = TEFLON; B = TYGON; C = SILICONE; D = POLYETHYLENE; E = COMBINATION TEFLON/TYGON/SILICONE		X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = TEFLON; B = TYGON; C = SILICONE; D = POLYETHYLENE; E = COMBINATION TEFLON/TYGON/SILICONE		X = SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] A = INLINE DISPOSABLE; B = PRESSURE; C = VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	610.912 (feet)	GROUNDWATER ELEVATION	609.49 (ft)
DEPTH TO WATER	1.43 (feet)	WELL DEPTH	19.41 (feet)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(units)	(mS/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(units)	(mS/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(units)	(mS/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(units)	(mS/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(units)	(mS/cm AT 25°C)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE GOOD ODOR NONE COLOR CLEAR SHEEN CLEAR

WEATHER AND FIELD WIND SPEED 0-5 FIELD NE PRECIPITATION SUNNY

SPECIFIC COMMENTS

I CERTIFY THAT WELL PURGING WAS CONDUCTED IN ACCORDANCE WITH APPLICABLE SOP'S

5/18/15 DANIEL WOLF Daniel E. Wolf

DATE PRINT NAME SIGNATURE

ANY MODIFICATIONS TO SOP'S MUST BE APPROVED BY A REVISION REQUEST FORM AND SIGNED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/18/15
Personnel: D. Wurf

Monitoring Well Data:

Well No.: MW-7-A-6
Measurement Point: TOR
Constructed Well Depth (ft): 14.25
Measured Well Depth (ft): 14.03
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]: 1.90
Initial Depth to Water (ft): 2.39

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, Vp (mL)	No. of Well Screen Volumes Purged[4]
1135		2.58	0.19	6.83	18.4	4.587	53.9	1.10	4.3	0	0
1205		2.61	0.22	6.80	18.3	4.532	21.3	0.16	3.9	0.2	0
1235		2.61	0.22	6.80	18.6	4.511	19.8	0.09	4.0	0.75	0
1305		2.61	0.22	6.80	19.3	4,171	12.4	0.07	4.3	1.2	0
1335		2.61	0.22	6.82	18.9	3,862	-3.1	0.03	4.1	1.6	0
1400		2.61	0.22	6.91	18.8	3.838	-3.3	0.02	3.9	1.9	1
1405		2.61	0.22	6.81	18.8	3.834	-4.3	0.01	4.0	2.0	1
1410		2.61	0.22	6.81	18.9	3.826	-4.1	0.02	3.9	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. $V_s=p^*(D/2)^{2*}(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOK-694.0

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

WELL PURGING FIELD INFORMATION FORM

JOB# 156146.00

SITE/PROJECT NAME: GMC H BCP SITE

WELL# MW-7+14-60

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS/GALLONS)	WATER VOL IN PUMP/TUBING (GALLONS)
05/18/15	05/18/15		

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (Y/N): O

SAMPLING EQUIPMENT DEDICATED (Y/N): O

PURGING DEVICE	13	A - SUBMERSIBLE PUMP	D - GAS OPERATED	G - OTHER
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRAM
SAMPLING DEVICE	13	C - BAILER	F - PURGE BOTTLE	
PURGING DEVICE	6	A - BAILER	C - PVC	
		B - STAINLESS STEEL	D - POLYETHYLENE	
SAMPLING DEVICE	6	C - DEDICATED PVC BAILER		
PURGING DEVICE	3	A - TEFLON	D - TYGON/SUPPLIANCE	G - SILICONE
		B - TYGON	E - POLYETHYLENE	H - COMBINATION TEFLON/POLYPROPYLENE
SAMPLING DEVICE	6	C - PVC		

FILTERING DEVICES 0.45: A - INLINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	(feet)	GROUNDWATER ELEVATION	(feet)
DEPTH TO WATER	23.9 (feet)	WELL DEPTH	14.08 (feet)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(ntu)	(µmhos) AT 25°C	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(µmhos) AT 25°C	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(µmhos) AT 25°C	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(µmhos) AT 25°C	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(µmhos) AT 25°C	(mV)	(mg/l)	(°C)

FIELD COMMENTS

SAMPLE ACCEPTANCE: GOOD ODOR: NONE COLOR: CLEAR APPEARANCE: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 WIND DIR: NE PRECIPITATION (Y/N): 0 CLOUDY

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLE ACQUISITION WAS PERFORMED IN ACCORDANCE WITH THE APPROVED WORK PLAN AND SAMPLING PROTOCOLS.

5/18/15 DANIEL WOLF Dale E. Wolf

DATE NAME SIGNATURE

ANY DEVIATIONS FROM PROTOCOL MUST BE APPROVED BY A REVISION REQUEST FORM AND APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMC IH BCP SITE
Ref. No.: 56546

Date: 5/15/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-7-C-2
Measurement Point: TOR
Constructed Well Depth (ft): 24.0
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 (mL)[2]: 3.0
Initial Depth to Water (ft): 5.97

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, Vp (mL)	No. of Well Screen Volumes Purged[4]
0806		5.85	0.34	6.84	12.6	2.591	20.8	2.35	1.1	0	0
0836		6.49	0.98	6.95	12.4	2.565	-51.4	0.24	1.8	0.4	0
0906		6.61	1.10	6.95	12.5	2.514	-55.3	0.17	1.0	0.8	0
0936		6.61	1.10	6.95	12.8	2.495	-57.6	0.13	0.9	1.2	0
1006		6.61	1.10	6.96	13.4	2.386	-63.2	0.06	1.1	2.0	0
1036		6.61	1.10	6.97	13.2	2.374	-64.1	0.07	0.8	2.5	0
1052		6.61	1.10	6.96	13.3	2.318	-67.1	0.05	1.0	3.0	1
1057		6.61	1.10	6.96	13.4	2.315	-67.6	0.05	0.9	3.1	1
1102		6.61	1.10	6.96	13.4	2.317	-67.7	0.05	0.9	3.2	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR-1.0ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 - 00

SITE/PROJECT NAME: _____

WELL# MW-7-CT2

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITRES/GALLONS)	PURGE VOLUME (LITRES/GALLONS)
05/15/15	05/15/15	13.0	13.2

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (Y/N) (CIRCLE ONE): Y

SAMPLING EQUIPMENT DEDICATED (Y/N) (CIRCLE ONE): Y

PURGING DEVICE	B	A. SUBMERSIBLE PUMP; B. PERISTALTIC PUMP; C. PISTON PUMP; D. GAS LIFT PUMP; E. BAILER; F. PUMP OR TUBING; G. AIR/GAS LIFT; H. OTHER (SPECIFY)		
SAMPLING DEVICE	B	A. SUBMER. PUMP; B. PERISTALTIC PUMP; C. BAILER; D. PUMP OR TUBING		
PURGING DEVICE	E	A. TEFLON; B. STAINLESS STEEL; C. POLYPROPYLENE; D. SILICONE; E. POLYETHYLENE; F. OTHER (SPECIFY)		
SAMPLING DEVICE	E	A. TEFLON; B. STAINLESS STEEL; C. POLYPROPYLENE; D. SILICONE; E. POLYETHYLENE; F. OTHER (SPECIFY)		
PURGING DEVICE	E	A. TEFLON; B. TYGON; C. POLYPROPYLENE; D. POLYETHYLENE; E. SILICONE; F. COMBINATION TEFLON/PP/PE; G. OTHER (SPECIFY)		
SAMPLING DEVICE	E	A. TEFLON; B. OTHER (SPECIFY)		C. OTHER (SPECIFY)
FILTERING DEVICES 0.45		A. INLINE DISPOSABLE; B. PRESSURE; C. VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION (feet/m)	610942	GROUNDWATER ELEVATION (feet/m)	610391
DEPTH TO WATER (feet/m)	551	WELL DEPTH (feet/m)	1408

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: NONE; COLOR: CLEAR; COLOR: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5; WIND DIR: SE; PRECIPITATION (Y/N): 0; CLOUDY

SPECIFIC COMMENTS: _____

I CERTIFY THAT SAMPLING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE PROCEDURES.

5/15/15 — DANIEL WOLF — [signature]

DATE — PRINT — SIGNATURE

SAMPLING DEVIATIONS MUST BE APPROVED BY A REVISION REQUEST FORM AND APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/26/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-7-P-1
Measurement Point: TOR
Constructed Well Depth (ft): 20
Measured Well Depth (ft): 19.89
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]: 1.6 GAL
Initial Depth to Water (ft): 10.16

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]
0830		10.53	0.37	6.28	21.5	25.476	-60.2	0.96	0.3	0	0
0900		11.08	1.02	6.21	21.4	25.439	-74.9	0.24	5.7	0.4	0
0930		11.27	1.21	6.26	21.7	27.922	-133.0	0.16	9.2	0.8	0
1000		11.27	1.21	6.27	21.7	20.590	-128.6	0.16	4.0	1.3	0
1030		11.27	1.21	6.27	21.9	20.372	-130.2	0.15	4.3	1.7	1
1035		11.27	1.21	6.27	22.2	20.292	-129.6	0.15	4.1	1.8	1
1040		11.27	1.21	6.27	22.1	20.327	-129.4	0.15	4.0	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM @ TOR = 2.0

WELL PURGING FIELD INFORMATION FORM

JOB# 516446-00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-7-R1

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITERS/GALLONS)	TOTAL VOLUME PURGED (LITERS/GALLONS)
05/26/15	05/26/15	1.6	9

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (CIRCLE ONE) SAMPLING EQUIPMENT DEDICATED Y (CIRCLE ONE)

PURGING DEVICE	3	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	C = BAILER; D = PECO PUMP	E = WATERRAM; X =
SAMPLING DEVICE	B	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	C = BAILER; D = PECO PUMP	E = WATERRAM; X =
PURGING DEVICE	P	A = TEFLON; B = STAINLESS STEEL	C = PVC; D = POLYETHYLENE	X =
SAMPLING DEVICE	P	A = TEFLON; B = STAINLESS STEEL	C = PVC; D = POLYETHYLENE	X =
PURGING DEVICE	E	A = TEFLON; B = TYGON	C = POLYPROPYLENE; D = POLYETHYLENE	E = SILICONE; F = COMBINATION TEFLON/POLYPROPYLENE; X =
SAMPLING DEVICE	E	A = TEFLON; B = TYGON	C = POLYPROPYLENE; D = POLYETHYLENE	E = SILICONE; F = COMBINATION TEFLON/POLYPROPYLENE; X =

(OTHER)

FILTERING DEVICES 0.45 A = INLINE DISPOSABLE B = PRESSURE C = VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (msl ft)	615.09	GROUNDWATER ELEVATION (msl ft)	610.93
DEPTH TO WATER (bgs ft)	10.16	WELL DEPTH (bgs ft)	19.89

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(ntu)	(µmhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmhos/cm AT 25°C)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(µmhos/cm AT 25°C)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: NONE COLOR: CLEAR OTHER: CLEAR

WEATHER CONDITIONS: SUNNY TEMP: 70's RAIN: NONE PREVIOUS 24 HOURS: NONE

SPECIFIC COMMENTS: INTERMITTENT LOCKING

I CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE ABOVE INFORMATION IS ACCURATE AND THAT ALL APPLICABLE CONTROLLING PROCEDURES WERE FOLLOWED IN ACCORDANCE WITH THE QAPP.

5/26/15 DATE DANIEL WELCH SIGNATURE Daniel E. Welch

FAILURE TO ATTAIN STABILIZATION MUST BE ACCOMPANIED BY A REVISION REQUEST APPROVED BY THE PROJECT MANAGER

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: GMCH BCP SITE — PROJECT NO.: 56546

SAMPLING CREW MEMBERS: D. WOLF — SUPERVISOR: T. BOWLEN

DATE OF SAMPLE COLLECTION: 5/12/15 - 5/22/15

[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-8-4 051215	MW-8-4	613.42	21.40	8.86	604.56	2.0	/	2.1	7.04	15.0	15.39	1520	VOC MNA
MW-6-1 051312	MW-6-1	598.23	18.38	4.84	593.39	2.3	/	2.5	6.84	11.6	3.334	1500	VOC MNA
MW-6-F-8 051415	MW-6-F-8	613.22	14.33	8.07	605.15	1.0	/	1.3	6.80	13.4	9,597	0945	VOC MNA
MW-6-2 051415	MW-6-2	609.33	26.15	6.0	603.33	3.4	/	3.5	6.88	12.7	6.407	1405	VOC MNA
MW-8-003B 051415	MW-8-003B	610.94	14.34	4.65	606.29	1.5	/	1.6	8.21	14.2	2.992	1625	VOC MNA
MW-8-3 052215	MW-8-3	615.06	22.05	8.50	606.56	2.2	/	2.4	6.86	20.0	6.555	1110	VOC MNA
MW-8-1 052215	MW-8-1	615.11	20.08	5.63	609.48	2.3	/	2.5	6.87	14.3	5.615	1050	VOC MNA
MW-8-2 052215	MW-8-2	615.14	22.76	7.64	607.50	2.4	/	2.6	7.18	18.4	1.979	1500	VOC MNA

Additional Comments:

Copies to:

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/13/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-6-1
Measurement Point: TOR
Constructed Well Depth (ft): 17
Measured Well Depth (ft): 18.83
Depth of Sediment (ft):

Screen Length (ft): 7'-17' = 10'
Depth to Pump Intake (ft)[1]: 15
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 2.3
Initial Depth to Water (ft): 4.84

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]
12:35		5.19	0.34	6.82	11.1	3.271	-111.5	1.92	7.4	0	0
13:05		5.18	0.34	6.85	10.8	3.305	-114.6	0.18	7.2	0.5	0
13:35		5.18	0.34	6.84	10.4	3.318	-116.4	0.10	7.5	1.2	0
14:05		5.18	0.34	6.84	11.2	3.320	-115.1	0.06	7.9	1.8	0
14:35		5.18	0.34	6.84	11.5	3.335	-116.5	0.11	7.2	2.3	1
14:40		5.18	0.34	6.83	11.6	3.363	-116.7	0.09	7.3	2.4	1
14:45		5.18	0.34	6.84	11.6	3.354	-116.3	0.08	7.3	2.5	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. $V_s = p^*(D/2)^{2*}(5^*12)^*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged = Vp / Vs.

OVM @ TOR = 0.0

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

WELL PURGING FIELD INFORMATION FORM

JOB# 565466-00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-6-1

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL EVACUATED (GALLONS)	
05/13/15	05/13/15	2.9	

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - PETRISTATIC PUMP; D - GRAVITY PUMP; E - PETRISTATIC PUMP; F - BAILER; G - WATERRAM		X - (SPECIFY)
SAMPLING DEVICE	B	A - BLADDER PUMP; B - PERISTALTIC PUMP		X - (SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - STAINLESS STEEL; C - POLY; D - POLYETHYLENE		X - (SPECIFY)
SAMPLING DEVICE	E	A - TEFLON/SILICONE		X - (SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - TYGON; C - POLYETHYLENE; D - POLYPROPYLENE; E - SILICONE; F - COMBINATION (SPECIFY)		X - (SPECIFY)
SAMPLING DEVICE	E	A - TEFLON; B - OTHER (SPECIFY)		X - (SPECIFY)
FILTERING DEVICES 0.45		A - INLINE DISPOSABLE; B - PRESSURE; C - VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION	598.23 (MSL)	GROUNDWATER ELEVATION	593.39 (MSL)
DEPTH TO WATER	4.84 (BTOC)	WELL DEPTH	18.83 (BTOC)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(pH)	(NTUs)	(Specific Conductance at 25°C)	(mV)	(%)	(°C)
(pH)	(NTUs)	(Specific Conductance at 25°C)	(mV)	(%)	(°C)
(pH)	(NTUs)	(Specific Conductance at 25°C)	(mV)	(%)	(°C)
(pH)	(NTUs)	(Specific Conductance at 25°C)	(mV)	(%)	(°C)
(pH)	(NTUs)	(Specific Conductance at 25°C)	(mV)	(%)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: NONE; COLOR: BROWNISH; TURBIDITY: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5; WIND DIR: NW; PRECIPITATION: P. CLOUDY

SPECIFIC COMMENTS:

5/13/15 DANIEL WOLF

DATE PRINT SIGN

PURGING AND SAMPLING MUST BE PERFORMED IN ACCORDANCE WITH APPROVED WORK PLAN AND QAPP UNLESS OTHERWISE APPROVED BY REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 5654

Date: 5/14/15
Personnel: D. Wolf

Monitoring Well Data:

Well No.: MW-6-2
Measurement Point: TOR
Constructed Well Depth (ft): 24.6
Measured Well Depth (ft): 26.15
Depth of Sediment (ft):

Screen Length (ft): 14.6' - 24.6' = 10'
Depth to Pump Intake (ft)[1]: 19
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 3.4
Initial Depth to Water (ft): 6.10

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]
1100		6.15	0.15	7.13	12.5	5,500	183.6	2.50	0.4	0	0
1130		6.15	0.15	7.07	11.7	5,389	182.6	1.39	0.3	0.4	0
1200		6.15	0.15	7.06	12.0	5,389	183.1	1.30	0.5	1.0	0
1230		6.15	0.15	7.05	12.4	5,424	185.1	1.25	0.6	1.6	0
1300		6.15	0.15	6.96	12.8	10,268	153.3	0.18	0.6	2.2	0
1330		6.15	0.15	6.90	12.8	6,370	137.4	0.11	0.8	2.8	0
1350		6.15	0.15	6.88	12.7	6,401	133.3	0.11	0.7	3.2	0
1355		6.15	0.15	6.88	12.5	6,410	132.7	0.11	0.6	3.3	0
1400		6.15	0.15	6.88	12.7	6,407	132.3	0.11	0.6	3.4	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 5-foot screen length, $V_s = p^*(D/2)^2 * (5*12) * (2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged = Vp/Vs.

OVM@ TOR =

WELL PURGING FIELD INFORMATION FORM

JOB# 565460.09

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-6-2

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS/GALLONS)	WELL DIAMETER (INCHES)
05/14/15	05/14/15	3.4	

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BAILER; D - GAS LIFT PUMP; E - PEristaltic PUMP; F - WATERRAS		X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A - SUBMER PUMP; B - PERISTALTIC PUMP; C - BAILER; D - GAS LIFT PUMP		X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	G	A - BAILER; B - PVC; C - STAINLESS STEEL; D - POLYETHYLENE		X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	C	A - BAILER; B - PVC; C - STAINLESS STEEL		X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	G	A - TEFLON; B - PVC; C - POLYPROPYLENE; D - SILICONE; E - POLYETHYLENE; F - COMBINATION TEFLON/PVC/POLYPROPYLENE		X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A - PVC; B - POLYETHYLENE; C - COMBINATION TEFLON/PVC/POLYPROPYLENE; X - (SPECIFY)		X - SAMPLING OTHER (SPECIFY)
FILTERING DEVICES (IF USED)		A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION	609.33 (feet)	GROUNDWATER ELEVATION	603.33 (feet)
DEPTH TO WATER	6.01 (feet)	WELL DEPTH	12.15 (feet)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/l)	(°C)
(s.u.)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/l)	(°C)
(s.u.)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/l)	(°C)
(s.u.)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/l)	(°C)
(s.u.)	(NTU)	(µmhos/cm) AT 25 C	(mV)	(mg/l)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: NONE; COLOR: CLEAR; SHEEN: CLEAR

WEATHER CONDITIONS: TEMPERATURE: 0-5; PRECIPITATION: W; PREVIOUS DAY'S RAINFALL: 0; SUNNY

SPECIFIC COMMENTS:

5/14/15 DANIEL WHITE

DATE SIGNATURE

ANY NON-CONFORMANCES MUST BE APPROVED BY A REVISION REQUEST PREPARED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 56544

Date: 5/14/15
Personnel: D. WJF

Monitoring Well Data:

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

Screen Length (ft): 8-15.4 = 7.4'
Depth to Pump Intake (ft)[1]: 12
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 1.0
Initial Depth to Water (ft): 8.07

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]
0820		8.19	0.12	6.73	11.9	9.176	208.6	1.97	0.6	0	0
0840		8.19	0.12	6.79	11.9	9.368	213.8	0.27	0.5	0.4	0
0900		8.19	0.12	6.80	12.0	9.457	214.1	0.17	0.5	0.7	0
0920		8.19	0.12	6.80	12.8	9.533	211.6	0.16	0.5	1.0	1
0925		8.19	0.12	6.80	12.9	9.542	209.9	0.16	0.4	1.1	1
0930		8.19	0.12	6.80	13.0	9.540	210.7	0.15	0.4	1.2	1
0935		8.19	0.12	6.80	13.1	9.547	210.5	0.15	0.4	1.3	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. $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OUMP TOR = 0.0

WELL PURGING FIELD INFORMATION FORM

JOB# 565460.20

SITE/PROJECT NAME: GMC H BCP SITE

WELL# MW-6-F-B

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOLUME REMOVED (LITRES/GALLONS)	WATER TEMPERATURE (CELSIUS/FAHRENHEIT)
05/14/15	05/14/15	10	13

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE): (Y) N

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE): (Y) N

PURGING DEVICE	B	A. SUBMERSIBLE PUMP; B. PERISTALTIC PUMP	D. GAS LIFT PUMP; E. PUMP BAILER	F. BAILER; G. OTHER
SAMPLING DEVICE	B	A. SUBMERSIBLE PUMP	B. DISPOSABLE BAILER	C. OTHER
PURGING DEVICE	E	A. TEFLON	B. PVC	C. POLYETHYLENE
SAMPLING DEVICE	E	A. TEFLON/POLYETHYLENE		
PURGING DEVICE	E	A. TEFLON	B. TEFLON/PVC BAILER	C. SILICONE
SAMPLING DEVICE	E	A. PVC	B. POLYETHYLENE	C. COMBINATION TEFLON/PVC/POLYETHYLENE

FILTERING DEVICE(S) 0.45 [ ] A. INLINE DISPOSABLE B. PEPRISTALTIC C. VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (m/ft)	6132	GROUNDWATER ELEVATION (m/ft)	6015
DEPTH TO WATER (m/ft)	807	WELL DEPTH (m/ft)	1433

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: CLEAR; ODOR: NONE; COLOUR: CLEAR; OTHER: CLEAR

WEATHER CONDITIONS: WIND: 0-5; PRECIPITATION: W; OTHER: SUNNY

SPECIFIC COMMENTS:

5/14/15 DANIEL WOLF

DATE PRINT NAME SIGNATURE

FOR ANY FIELD MEASUREMENTS OUTSIDE OF THE SPECIFIED RANGE, CONTACT THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/22/15
Personnel: D. WULF

Monitoring Well Data:

Well No.: MW-8-1
Measurement Point: TOR
Constructed Well Depth (ft): 22.5
Measured Well Depth (ft): 20.08
Depth of Sediment (ft):

Screen Length (ft): 7'
Depth to Pump Intake (ft)[1]: 17
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 2.3
Initial Depth to Water (ft): 5.63

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]
0815		5.90	0.27	6.76	14.7	5.656	+56.9	1.46	4.7	0	0
0845		6.03	0.40	6.82	14.4	5.571	-204.4	0.22	2.3	0.5	0
0915		6.13	0.50	6.83	14.2	5.604	-228.6	0.10	4.1	1.0	0
0945		6.13	0.50	6.83	14.3	5.612	-239.2	0.07	4.8	1.5	0
1015		6.13	0.56	6.83	14.4	5.615	-241.3	0.07	4.5	2.0	0
1035		6.13	0.50	6.83	14.3	5.606	-247.0	0.06	4.2	2.3	1
1050		6.13	0.50	6.82	14.4	5.610	-249.2	0.06	4.1	2.4	1
1045		6.13	0.50	6.83	14.3	5.615	-246.3	0.05	4.0	2.5	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. $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

PURGED SEDIMENT OUT OF WELL AFTER SAMPLING

OVM@TOR = 0.0

WELL PURGING FIELD INFORMATION FORM

JOB# 565416 -

SITE/PROJECT NAME: GMCH BCP SITE

WELL#

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS)	TIME SAMPLE PURGED (2400 HR)
05/21/15	05/22/15	12.3	

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED? (Y/N): O

SAMPLING EQUIPMENT DEDICATED? (Y/N): O

PURGING DEVICE	B	A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP	D - GRAVITY DRAIN; E - PEristaltic PUMP	G - OTHER; H - WATERRAS	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A - BLADDER PUMP	E - DISPOSABLE BAILER		X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	C	A - PERISTALTIC; B - STAINLESS STEEL	E - PVC; F - POLYETHYLENE		X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	C	A - PERISTALTIC PUMP			X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	D	A - PERISTALTIC; B - SUBMERSIBLE	E - PVC; F - POLYETHYLENE	G - SILICONE; H - COMBINATION; TEFLON/POLYPROPYLENE	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	A - PUMP	X = (SPECIFY)		X = SAMPLING OTHER (SPECIFY)
FILTERING DEVICES 0.45		A - INLINE DISPOSABLE	B - PRESSURE	C - VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION (msl)	61151	GROUNDWATER ELEVATION (msl)	61094.8
DEPTH TO WATER (ft)	56.3	WELL DEPTH (ft)	120.8

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: SULPHUR; SKY: CLOUDY; PRECIP: CLOUDY

WEATHER CONDITIONS: WIND SPEED: 05; WIND DIR: SW; PRECIP LAST 24 HRS: P. Cloudy

SPECIFIC COMMENTS: INTERIOR LOCATION

I CERTIFY THAT SAMPLING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE PROTOCOL

5/22/15 DAVID WOLF

DATE PRINT SIGN

FAILURE TO FOLLOW PROTOCOL MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE TRIBAL ATTORNEY

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 365426
Date: 5/22/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-8-2
Measurement Point: TOR
Constructed Well Depth (ft): 23.0
Measured Well Depth (ft): 22.76
Depth of Sediment (ft):
Screen Length (ft):
Depth to Pump Intake (ft)[1]: 19
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 2.4 gal
Initial Depth to Water (ft): 7.68

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]
12:15		8.19	0.55	7.59	19.0	2,193	-16.0	1.28	0.6	0	0
12:45		8.37		7.54	19.6	2,116	-46.5	0.79	0.7	0.5	0
13:15		8.37		7.51	19.1	2,091	-47.9	0.33	0.6	1.0	0
13:45		8.37		7.49	18.9	2,047	-55.2	0.20	0.7	1.5	0
14:15		8.37		7.26	18.8	1,975	-90.4	0.15	0.8	2.0	0
10:45		8.37		7.19	18.7	1,963	-120.7	0.09	0.8	2.4	1
14:59		8.37		7.18	18.6	1,972	-121.6	0.08	0.7	2.5	1
15:15		8.37		7.18	18.6	1,979	-128.3	0.07	0.6	2.6	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, $V_s=p^*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= V_p/V_s.

OVM @ TOR = 3.4 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 516546.00

SITE/PROJECT NAME: GMCH BGP SITE

WELL# MW-8-2

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (GALLONS/GALLONS)	CASING VOLUME PURGED (GALLONS)
05/22/15	05/22/15	24	26

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: DEDICATED (Y/N) — SAMPLING EQUIPMENT: DEDICATED (Y/N)

PURGING DEVICE	B	A. SUBMERSIBLE PUMP	D. TRIP BLANK	G. BAILER	X=
		B. PERISTALTIC PUMP	E. PEristaltic PUMP	H. DEDICATED	PURGING OTHER SPECIFY
SAMPLING DEVICE	B	C. BLADDER PUMP	F. GRAB BOTTLE		X=
					SAMPLING OTHER SPECIFY
PURGING DEVICE	G	A. BAILER PVC	D. PVC		X=
		B. BAILER TEFLON	E. POLY ETHYLENE		PURGING OTHER SPECIFY
SAMPLING DEVICE	G	A. BAILER PVC			X=
					SAMPLING OTHER SPECIFY
PURGING DEVICE	E	A. PERISTALTIC	D. PVC TUBING	F. SILICONE	X=
		B. TYGON	E. POLY ETHYLENE	G. COMBINATION TEFLON/POLYPROPYLENE	PURGING OTHER SPECIFY
SAMPLING DEVICE	E	A. PUMP	X=		X=
			(UNITS)		SAMPLING OTHER SPECIFY
FILTERING DEVICES 0.45		A. INLINE DISPOSABLE	B. PRESSURE	C. VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION	6115.14 (msl)	GROUNDWATER ELEVATION	6071.50 (msl)
DEPTH TO WATER	76.14 (bgs)	WELL DEPTH	122.76 (bgs)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(s.u.)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD — ODOR: SULPHUR — COLOR: YELLOW — COLOR: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 — WIND DIR: SW — PRECIPITATION (Y/N): 0 — P. CLOUDY

SPECIFIC COMMENTS:

IF NEW FIELD PARAMETERS ARE BEING MEASURED, EXPLAIN HOW THEY WERE DETERMINED:

5/22/15 — DANIEL WOLF — SIGNATURE

PURGE ALL LOCATIONS ARE SUBJECT TO CHANGE BY REVISION REQUEST APPROVED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/21/15
Personnel: DWW

Monitoring Well Data:

Well No.: MW-8-3
Measurement Point: TOR
Constructed Well Depth (ft): 22.4
Measured Well Depth (ft): 22.05
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]: 2.2
Initial Depth to Water (ft): 8.50

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]
5/21/15											
1350		9.20		6.96	20.8	7.040	-109.2	0.91	0.9	0	0
1355		9.97		6.98	20.7	7.546	-110.4	1.14	3.9	0.3	0
1400		11.05		7.07	20.1	6.823	-67.1	1.98	3.5	0.5	0
1405		12.52		7.07	20.10	6.631	-21.0	2.03	3.9	1.0	0
1410		13.88		6.94	20.10	7.785	-102.0	0.34	4.2	1.25	0
1415		15.34		6.93	20.0	6.930	-90.2	1.45	5.2	1.5	0
1420		16.92		6.90	20.1	6.646	-65.4	1.64	5.0	1.75	0
1425		18.32		6.89	20.0	6.631	-70.0	1.88	4.8	2.2	1
1430	DRY	19.0		6.86	20.10	6.5555	-63.5	1.75	5.0	2.4	1
5/22/15											
1100		8.55	SAMPLED WELL								

½ HR

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. $V_s = p^*(D/2)^{2*}(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR = 0.8 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565416-00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-B-3

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL. EVACUATED (GALLONS/GALLONS)	NUMBER OF PUMP PURGES (CIRCLE ONE)
05/21/15	05/21/15	2.4	2.4

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE): D

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE): D

PURGING DEVICE	B	B - BLADDER PUMP	D - CHECK VALVE PUMP	G - OTHER (SPECIFY)
		E - PERISTALTIC PUMP	F - PEDESTAL PUMP	H - WATERRAS
SAMPLING DEVICE	B	B - BLADDER PUMP	E - PERISTALTIC PUMP	G - OTHER (SPECIFY)
PURGING DEVICE	G	A - DIPPER	B - BAILER	G - OTHER (SPECIFY)
		B - STAINLESS STEEL	C - RUBBER	
SAMPLING DEVICE	G	A - DIPPER	B - BAILER	G - OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	D - POLYVINYLIDENE FLUORIDE	F - SILICONE
		B - TYGON	E - POLYETHYLENE	G - OTHER (SPECIFY)
SAMPLING DEVICE	E	A - TEFLON	D - POLYVINYLIDENE FLUORIDE	F - SILICONE
		B - TYGON	E - POLYETHYLENE	G - OTHER (SPECIFY)
		C - PVC		
		(SPECIFY)		
FILTERING DEVICES 0.45		A - INLINE DISPOSABLE	B - PRESSURE	C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (MSL)	615.06	GROUNDWATER ELEVATION (MSL)	606.56
DEPTH TO WATER (BTOC)	8.50	WELL DEPTH (BTOC)	22.05

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: NONE COLOR: CLEAR OTHER: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 WIND DIRECTION: SW PRECIPITATION (Y/N): N SUNNY

SPECIFIC COMMENTS:

I ATTEST THAT SAMPLES WERE COLLECTED IN ACCORDANCE WITH APPLICABLE PROCEDURES

5/21/15 DATE DANIEL WERT SIGNATURE

FAILURE TO OBTAIN SAMPLES AS SPECIFIED MAY RESULT IN A REVISION REQUEST BEING ISSUED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 56544

Date: 5/12/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-8-4
Measurement Point: TOR
Constructed Well Depth (ft): 21.8
Measured Well Depth (ft): 21.40
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]: 2.0
Initial Depth to Water (ft): 8.86

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, Vp (mL)	No. of Well Screen Volumes Purged[4]
1238		9.53	0.67	7.02	15.3	10.046	98.7	1.23	10.1	0	0
1308		10.40	1.54	7.26	15.9	5.591	123.7	3.77	9.4	.4	0
1338		10.36	1.50	7.07	15.9	9.885	87.3	2.15	4.9	.8	0
1408		10.36	1.50	7.03	15.4	13.707	-40.1	0.89	2.6	1.3	0
1420		10.36	1.50	7.03	15.1	14.858	-69.6	0.57	3.1	1.6	0
1426		10.36	1.50	7.03	14.9	15.219	-70.3	0.48	3.0	1.7	0
1508		6.36	1.50	7.04	15.6	15.463	-72.2	0.51	3.2	1.9	0
1513		6.36	1.50	7.03	15.2	15.369	-70.9	0.47	3.3	2.0	1
1518		6.36	1.50	7.04	15.0	15.391	-71.6	0.48	3.3	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. $V_s = p^*(D/2)^{2*}(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR=0.0ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565466 - 00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-8-4

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITRES/GALLONS)	PURGE PUMP DEPTH (FEET BTOC)
05/12/15	05/12/15	20	

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED? Y (0) N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED? Y (0) N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - PISTON PUMP; D - GAS LIFT PUMP; E - BAILER; F - DIPPER; G - WATERCRAFT		X = (PURGING OTHER SPECIFY)
SAMPLING DEVICE	B	A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BAILER		X = (SAMPLING OTHER SPECIFY)
PURGING DEVICE	E	A - BLADDER; B - STAINLESS STEEL; C - TEFLON; D - POLYPROPYLENE; E - POLYETHYLENE		X = (PURGING OTHER SPECIFY)
SAMPLING DEVICE	E	A - PUMP; B - PERISTALTIC PUMP; C - BAILER		X = (SAMPLING OTHER SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - POLYPROPYLENE; C - SILICONE; D - TYGON; E - POLYETHYLENE; F - COMBINATION TEFLON/PVC/POLYETHYLENE		X = (PURGING OTHER SPECIFY)
SAMPLING DEVICE	E	A - PUMP; B - (NOT USED); C - BAILER		X = (SAMPLING OTHER SPECIFY)
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE; B - DISPOSABLE; C - VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION (MSL)	16134.2	GROUNDWATER ELEVATION (MSL)	60456
DEPTH TO WATER (BTOC)	8816	WELL DEPTH (BTOC)	2140

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: NONE; COLOR: CLEAR; OTHER: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-15; WIND DIR: SW; PRECIPITATION (YES/NO): 0; P.CLOUDY

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLES WERE COLLECTED AND HANDLED IN ACCORDANCE WITH THE APPROVED WORK PLAN AND ALL APPLICABLE SOPS.

5/12/15 DATE — DANIEL WOLF PRINT — SIGNATURE

PURGING AND SAMPLING MAY BE INITIATED WITH A VERBAL REQUEST FOR APPROVAL FROM A PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/14/15
Personnel: D. Wuest

Monitoring Well Data:

Well No.: MW-8-003B
Measurement Point: TOR
Constructed Well Depth (ft): 15
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]: 1.5
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 (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged[4]
1430		4.78	0.13	8.25	15.1	2.836	169.8	1.33	19.9	0	0
1500		4.78	0.13	8.21	14.5	2.698	166.5	1.00	19.0	0.4	0
1530		4.78	0.13	8.19	14.5	2.776	155.1	0.83	15.9	0.8	0
1600		4.78	0.13	8.18	14.5	2.936	145.9	1.32	9.6	1.2	0
1610		4.78	0.13	8.21	14.5	2.971	145.3	0.80	7.1	1.4	0
1615		4.78	0.13	8.21	14.3	2.985	144.3	0.75	6.6	1.5	1
1620		4.78	0.13	8.21	14.2	2.992	144.2	0.72	6.4	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, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565460

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-8-0038

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITERS/GALLONS)	PURGE VOLUME PURGED (LITERS/GALLONS)
05/14/15	05/14/15	1.5	6.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	D = GAS LIFT PUMP; E = PURGE PUMP	G = BAILER; H = WATERRAS	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = SUBMERSIBLE PUMP	E = PURGE BOTTLE		X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	G	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	D = GAS LIFT PUMP; E = PURGE BOTTLE		X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	G	A = SUBMERSIBLE PUMP	E = PURGE BOTTLE		X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	F	A = TEFLON; B = TYGON	D = TYGON/SILICONE; E = PURGE BOTTLE	F = SILICONE; G = COMBINATION TEFLON/POLYPROPYLENE	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	F	A = TEFLON	X = _____ (SPECIFY)		X = SAMPLING OTHER (SPECIFY)

FILTERING DEVICES (Y/N) _____ A = INLINE DISPOSABLE; B = PRESSURE; C = VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	161.094 (ft MSL)	GROUNDWATER ELEVATION	160.629 (ft MSL)
DEPTH TO WATER	14.65 (ft TOC)	WELL DEPTH	19.34 (ft TOC)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(NTU)	(uS/cm @ 25 C)	(mV)	(mg/L)	(°C)
(std)	(NTU)	(uS/cm @ 25 C)	(mV)	(mg/L)	(°C)
(std)	(NTU)	(uS/cm @ 25 C)	(mV)	(mg/L)	(°C)
(std)	(NTU)	(uS/cm @ 25 C)	(mV)	(mg/L)	(°C)
(std)	(NTU)	(uS/cm @ 25 C)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: NONE; COLOR: CLEAR; SEDIMENT: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5; WIND DIR: W; PRECIPITATION (Y/N): 0; SUNNY

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE SOP PROTOCOL

PRINT: DANIEL WOLF SIGN: DWolf

FAILURE TO COMPLETE ALL SECTIONS OF THIS FORM MAY RESULT IN A REVISION REQUEST BEING ISSUED BY THE TRUSTEE/QA OFFICER

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: GMCH BCP 5175 | PROJECT NO.: 56546

SAMPLING CREW MEMBERS: D. WOLF | SUPERVISOR: T. BOHLEN

DATE OF SAMPLE COLLECTION: 5/19/15 – 5/26/15

[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-10-2 051915	MW-10-2	611.26	16.10	2.93	608.33	2.1		2.3	7.11	15.6	6.52	1420	VOC MNA
MW-10-3 052015	MW-10-3	610.40	15.40	3.13	607.27	2.0		2.2	7.53	10.5	1.774	1100	VOC MNA
TK-6 052015	TK-6	621.69	13.70	9.58	612.11	2.3		2.6	7.30	12.9	3.409	1430	VOC MNA
MW-9-101-A 052115	MW-9-101-A	615.00	12.54	4.72	610.28	1.3		1.5	7.06	13.6	9.017	0945	VOC MNA
MW-9-12 052115	MW-9-12	614.92	15.35	5.70	609.22	1.5		1.7	7.22	13.3	3.38	1310	VOC MNA
BCDG-10-MW-1 052615	BCDG-10-MW-1	615.05	15.55	5.79	610.16	1.6		1.8	7.06	19.9	2.470	1500	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 SITE
Ref. No.: 565F6

Date: 5/26/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: BCDG-10-MW-1
Measurement Point: TOR
Constructed Well Depth (ft): 16
Measured Well Depth (ft): 15.55
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 (mL)[2]: 1.6
Initial Depth to Water (ft): 5.79

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]
1:30		6.39	0.60	7.06	19.8	2.438	-66.3	0.73	0.5	0	
1300		6.39	0.60	7.04	19.7	2.540	-73.5	0.45	0.6	0.3	
1330		6.39	0.60	7.04	19.7	2.512	-75.8	0.37	0.6	0.8	
1400		6.39	0.60	7.04	19.8	2.495	-76.3	0.36	0.6	1.2	
1430		6.39	0.60	7.05	19.9	2.469	-76.4	0.37	0.6	1.6	
1435		6.39	0.60	7.01	19.9	2.472	-76.5	0.36	0.6	1.7	
1440		6.39	0.60	7.06	19.9	2.476	-76.3	0.37	0.6	1.8	

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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM@TOR=3260 ppm PEAK

WELL PURGING FIELD INFORMATION FORM

JOB# 565416.00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# BLDG-10-MW-5

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (LITERS/GAL)	
05/26/15	05/26/15	1.16	1.18

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT: DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	13	1 = SUBMERSIBLE PUMP; 2 = PERISTALTIC PUMP	3 = PEACOCK PUMP; 4 = PEACOCK PUMP	5 = BAILER; 6 = WATERRAS	7 = OTHER (SPECIFY)
SAMPLING DEVICE	13	8 = BLADDER PUMP	9 = GRAB SAMPLE		SAMPLING DEVICE (SPECIFY)
PURGING DEVICE	13	A = TEFLON	B = PVC		PURGING OTHER (SPECIFY)
SAMPLING DEVICE	13	C = STAINLESS STEEL	D = POLYETHYLENE		SAMPLING OTHER (SPECIFY)
PURGING DEVICE	6	E = TYGON	F = POLYPROPYLENE	G = SILICONE	PURGING OTHER (SPECIFY)
SAMPLING DEVICE	6	H = NONE	I = POLYETHYLENE	J = COMBINATION TEFLON/POLYPROPYLENE	SAMPLING OTHER (SPECIFY)
FILTERING DEVICES 0.45		K = INLINE DISPOSABLE	L = PRESSURE	M = VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION	16.15.05 (MSL)	GROUNDWATER ELEVATION	16.10.16 (MSL)
DEPTH TO WATER	5.79 (TOC)	WELL DEPTH	15.55 (MSL)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: SLIGHT; GROUP: CLEAR; COLOR: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5; WIND DIR: SW; PRECIPITATION (Y/N): N; P. SUNNY

SPECIFIC CONSTITUENTS: INTERIOR LOCATION

5/26/15 DANIEL WILF

DATE SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/21/15
Personnel: DWLF

Monitoring Well Data:

Well No.: MW-9-101-A
Measurement Point: TOR
Constructed Well Depth (ft): 12.54
Measured Well Depth (ft): 9.06 - BAILER IN WELL (12.19' AFTER BAILER REMOVAL 5/22/15)
Depth of Sediment (ft): BAILER REMOVED 5/22/15

Screen Length (ft): 5
Depth to Pump Intake (ft)[1]: 8
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1.3
Initial Depth to Water (ft): 4.72

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]
0930		4.74	0.02	6.99	12.6	9.960	226.2	2.57	1.0	0	0
0935		4.74	0.02	7.00	13.0	9.998	223.3	2.35	0.8	0.3	0
0940		4.76	0.02	7.04	13.4	9.990	220.0	2.39	0.6	0.79	0
0945		4.74	0.02	7.05	13.5	9.989	221.3	2.41	0.6	1.0	0
0950		4.76	0.04	7.05	13.5	9.986	223.1	2.42	0.5	1.35	0
0955		4.74	0.02	7.06	13.5	9.986	222.7	2.40	0.4	1.35	1
1000		4.74	0.02	7.06	13.6	9.987	221.2	2.43	0.4	1.5	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. $V_s = \pi * (D/2)^2 * (5*12) * (2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged = V_p/V_s.

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565416.00

SITE/PROJECT NAME: GMC1 BCP SITE

WELL# MW-9-101-14

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITERS/GALLONS)	WELL DEPTH (FEET)
05/21/15	05/21/15	1.3	15

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED 0 (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED 0 (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - BAILER E - PECRISTALTIC PUMP	G - OTHER H - WATERRAS
SAMPLING DEVICE	B	A - SUBMERSIBLE PUMP	E - PECRISTALTIC PUMP	G - OTHER
PURGING DEVICE	C	A - PERISTALTIC B - STAINLESS STEEL	C - PVC D - POLYETHYLENE	G - OTHER
SAMPLING DEVICE	C	A - PERISTALTIC PUMP		G - OTHER
PURGING DEVICE	G	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	F - SILICONE G - COMBINATION TEFLON/POLYPROPYLENE
SAMPLING DEVICE	G	A - TEFLON		G - OTHER

FILTERING DEVICES 0.45 — A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (MSL)	611.00	GROUNDWATER ELEVATION (MSL)	609.28
DEPTH TO WATER (FT)	4.72	WELL DEPTH (FT)	11.54

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE GOOD ODOR NONE COLOR CLEAR COLOR CLEAR

WEATHER CONDITIONS WIND SPEED 0-5 WIND DIR SE PRECIPITATION (IN) 0 P. SUNNY

SPECIFIC COMMENTS

BAILER REMOVED FROM WELL 5/22/15

I ATTEST THAT SAMPLING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE PROTOCOL

5/21/15 DERICK WOLF

DATE SIGNATURE

FAILURE TO FOLLOW PROTOCOL MAY RESULT IN REJECTION OF SAMPLE AND/OR REVISIT REQUEST PURSUANT TO AGREEMENT WITH THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/21/15
Personnel: D. WILL

Monitoring Well Data:

Well No.: MW-9-12
Measurement Point: TOR
Constructed Well Depth (ft): 15.43
Measured Well Depth (ft): 15.35
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]: 1.5 GAL
Initial Depth to Water (ft): 5.90

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]
1120		5.73	0.03	7.28	12.8	3.560	227.1	0.84	1.0	0	0
1150		5.73	0.03	7.23	13.1	3.366	226.9	0.25	1.7	0.5	0
1220		5.73	0.03	7.22	13.2	3.349	220.6	0.18	2.0	1.0	0
1250		5.73	0.03	7.22	13.1	3.354	215.6	0.13	2.1	1.5	1
1255		5.73	0.03	7.22	13.2	3.358	214.8	0.17	2.5	1.6	1
1300		5.73	0.03	7.22	13.3	3.367	213.1	0.17	2.2	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. $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

PURGED SEDIMENT FROM BOTTOM OF WELL AFTER SAMPLING

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565460.00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-9-12

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (GALLONS)	
05/21/15	05/21/15	1.5	

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE): O

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE): O

PURGING DEVICE	B	A - SUBMERSIBLE PUMP (PERISTALTIC)	D - GAS LIFT PUMP	G - OTHER
SAMPLING DEVICE	B	B - BLADDER PUMP	E - PERISTALTIC PUMP	H - WATERRA®
PURGING DEVICE	D	C - DISPOSABLE	F - PUMP OR TUBING	
SAMPLING DEVICE	E			
PURGING DEVICE	B	A - TEFLON®	D - POLY-SURFLEX®	F - SILICONE
SAMPLING DEVICE	B	B - TYGON®	E - POLYETHYLENE	G - COMBINATION TEFLON®/POLYPROPYLENE

FILTERING DEVICE: 0.45 A - INLINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	6.14.92 (MSL)	GROUNDWATER ELEVATION	6.09.22 (MSL)
DEPTH TO WATER	5.70 (TOC)	WELL DEPTH	15.35 (TOC)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: HONE COLOR: CLEAR TURBIDITY: CLEAR

WEATHER CONDITIONS: WIND: 0-5 DIR: SE PRECIPITATION: 0 P. SUNNY

SPECIFIC COMMENTS:

5/21/15 DANIEL WOLF

DATE NAME SIGNATURE

FIELD MODIFICATIONS MUST BE APPROVED AND INITIALED BY A REVISION REQUEST FORM COMPLETED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

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

Date: 5/19/15
Personnel: D. Wulf

Monitoring Well Data:

Well No.: MW-10-2
Measurement Point: TOR
Constructed Well Depth (ft): 16.80
Measured Well Depth (ft): 16.10
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 (mL)[2]: 2.1
Initial Depth to Water (ft): 2.93

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]
1200		3.25	0.42	7.50	14.7	7.132	-133.6	0.31	3.0	0	0
1230		3.85	0.92	7.24	15.9	6.952	-130.3	0.11	5.9	0.5	0
1300		4.32	1.39	7.13	15.4	6.693	-119.3	0.08	4.6	1.0	0
1330		4.55	1.68	7.12	15.3	6.624	-103.2	0.06	5.2	1.6	0
1400		4.57	1.62	7.10	15.3	6.591	-93.8	0.06	3.3	2.1	1
1405		4.55	1.60	7.11	15.5	6.579	-92.6	0.05	4.3	2.2	1
1410		4.55	1.62	7.11	15.6	6.576	-91.4	0.05	5.1	2.3	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, $V_s = p^*(D/2)^{2*}(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 516546.00

SITE/PROJECT NAME: GMCH BCP SITE

WELL# MW-10+7

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS)	PURGE VOLUME (GALLONS)
05/19/15	05/19/15	21	23

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT (CIRCLE ONE): D

SAMPLING EQUIPMENT (CIRCLE ONE): DEDICATED B

PURGING DEVICE	B	A - SUBMERSIBLE PUMP (GRUNDFOS OR EQUIV.)	D - PERISTALTIC PUMP	G - OTHER
		B - PERISTALTIC PUMP	E - PEristaltic PUMP	H - WATERRAM
SAMPLING DEVICE	B	A - BLADDER PUMP	E - PERISTALTIC PUMP	G - OTHER (SPECIFY)
PURGING DEVICE	B	A - BAILER	D - PVC	G - OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE	
SAMPLING DEVICE	B	C - DEDICATED DISPOSABLE		G - OTHER (SPECIFY)
PURGING DEVICE	B	A - TEFLON	D - POLYPROPYLENE	F - SILICONE
		B - TEFLON	E - POLYETHYLENE	G - OTHER (SPECIFY)
SAMPLING DEVICE	B	C - PVC	C - COMBINATION TEFLON/POLYPROPYLENE	G - OTHER (SPECIFY)
FILTERING DEVICES 0.45		A - INLINE DISPOSABLE	B - PRESS OR	C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (MSL)	61.26	GROUNDWATER ELEVATION (MSL)	61.33
DEPTH TO WATER (BTOC)	29.5	WELL DEPTH (BTOC)	31.10

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: NONE SHEEN: CLEAR OTHER: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 WIND DIR: SW PRECIPITATION: 0 CLOUDY

SPECIFIC COMMENTS:

SAMPLED BY (PRINT): DANIEL WOLF SIGNATURE: Dal E. Wolf

5/19/15 DANIEL WOLF

DATE PRINT SIGNATURE

ANY ANALYTICAL RESULTS REVISED AS A RESULT OF A REVISION REQUEST FORM SUBMITTED BY THE PROJECT MANAGER

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 564416

Date: 5/20/15
Personnel: D. Wells

Monitoring Well Data:

Well No.: MW-10-3
Measurement Point: TOR
Constructed Well Depth (ft): 15.20
Measured Well Depth (ft): 15.40
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]: 2.0 GAL
Initial Depth to Water (ft): 3.13

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]
0830		3.54	0.41	7.09	9.2	1.509	154.2	1.77	0.9	0	0
0840		3.92	0.79	7.51	8.3	1.623	138.6	0.94	0.9	0.3	0
0910		3.98	0.85	7.50	9.1	1.776	129.2	0.72	0.8	0.7	0
0940		3.98	0.85	7.53	9.5	1.788	110.7	0.71	0.7	1.3	0
1010		3.98	0.85	7.53	10.1	1.790	90.2	0.88	0.6	1.7	0
1030		3.98	0.85	7.53	10.2	1.787	88.9	0.94	1.0	2.0	1
1035		3.98	0.85	7.53	10.4	1.780	86.5	0.99	0.8	2.1	1
1040		3.98	0.85	7.53	10.5	1.774	85.4	1.01	0.7	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. $V_s=p^*(D/2)^{2*}(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM @ TOC = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 5 6 5 4 6 - 0 0

SITE/PROJECT NAME: GMCW BCP SITE

WELL# MW - 10 - 3

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (GALLONS)	TOTAL VOLUME PURGED (GALLONS)
05/20/15	05/20/15	2.0	2.2

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE) Y / N

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE) Y / N

PURGING DEVICE	B	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	C = BAILER; D = PECO PUMP	E = WATERRA; F = OTHER (SPECIFY)
SAMPLING DEVICE	B	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	C = BAILER; D = OTHER (SPECIFY)	
PURGING DEVICE	B	A = TEFLON; B = STAINLESS STEEL	C = PVC; D = POLYETHYLENE	E = OTHER (SPECIFY)
SAMPLING DEVICE	B	A = TEFLON; B = STAINLESS STEEL	C = POLYETHYLENE	D = OTHER (SPECIFY)
PURGING DEVICE	B	A = TEFLON; B = SILICONE	C = PVC; D = POLYETHYLENE	E = OTHER (SPECIFY)
SAMPLING DEVICE	B	A = TEFLON; B = SILICONE; C = PVC; D = POLYETHYLENE	E = COMBINATION TEFLON/POLYETHYLENE	F = OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] A = IN-LINE DISPOSABLE B = PRESSURE C = VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	610.40 (feet)	GROUNDWATER ELEVATION	607.27 (feet)
DEPTH TO WATER	3.13 (feet)	WELL DEPTH	15.40 (feet)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(s.u.)	(ntu)	(umhos/cm at 25 C)	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(umhos/cm at 25 C)	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(umhos/cm at 25 C)	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(umhos/cm at 25 C)	(mV)	(mg/l)	(°C)
(s.u.)	(ntu)	(umhos/cm at 25 C)	(mV)	(mg/l)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: NONE COLOR: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-10 WIND DIR: SW PRECIPITATION (Y/N): 0 CLOUDY

SPECIFIC COMMENTS:

I CERTIFY THAT I HAVE READ AND AGREE WITH ALL CHANGES AND/OR ADDITIONS TO THE FIELD SAMPLING PLAN

5/20/15 DANIEL WERT

DATE PRINT SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP SITE
Ref. No.: 565+6

Date: 5/20/14
Personnel: D. WOOF

Monitoring Well Data:

Well No.: TK-6
Measurement Point: TOR
Constructed Well Depth (ft):
Measured Well Depth (ft): 13.17
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 12
Well Diameter, D (in): 4"
Well ~~Screen~~ Volume, V_s (mL)[2]: 2.3
Initial Depth to Water (ft): 9.58

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]
1150		9.66	0.08	7.34	12.0	3.120	129.5	3.03	0.4	0	0
1220		9.71	0.13	7.32	12.4	3.171	119.7	2.62	1.3	0.5	0
1250		9.79	0.21	7.30	12.6	3.290	121.7	2.71	3.3	1.2	0
1320		9.79	0.21	7.30	12.9	3.398	124.8	2.62	1.8	1.8	0
1350		9.79	0.21	7.30	13.3	3.419	124.6	2.45	3.1	2.4	1
1355		9.79	0.21	7.30	13.4	3.414	124.4	2.43	3.4	2.5	1
1400		9.79	0.21	7.30	12.9	3.409	124.6	2.33	3.3	2.6	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. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

GUM@TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 565446-00

SITE/PROJECT NAME: GIMCH BCP SITE

WELL# TK-6

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (GALLONS)	PURGE VOLUME (GALLONS)
05/20/15	05/20/15	2.3	36

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (CIRCLE ONE) Y / N

SAMPLING EQUIPMENT DEDICATED (CIRCLE ONE) Y / N

PURGING DEVICE	B	A = SUBMERSIBLE PUMP; B = PERISTALTIC PUMP	D = GAS LIFT PUMP; E = PUMP	G = BAILER; H = WATERRA®	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = SUBMERSIBLE PUMP	E = DISPOSABLE BOTTLE		X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	B	A = BLADDER; B = TEFLON	E = PVC; F = POLYETHYLENE		X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = BLADDER; B = TEFLON	E = PVC; F = POLYETHYLENE		X = SAMPLING OTHER (SPECIFY)
PURGING DEVICE	B	A = TEFLON; B = POLY A; C = POLY B	D = PVC; E = POLYETHYLENE	F = SILICONE; G = COMBINATION TEFLON/POLYPROPYLENE	X = PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A = POLY A; B = POLY B	E = PVC; F = POLYETHYLENE		X = SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: A = INLINE DISPOSABLE; B = PRESS; C = VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (msl)	16.69	GROUNDWATER ELEVATION (msl)	14.11
DEPTH TO WATER (ft)	19.58	WELL DEPTH (ft)	33.47

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD; ODOR: MOND; COLOR: CLEAR; CLOUD: CLOUD

WEATHER AND FROM: WIND: 0-5; RAIN: SUN; PURGE TO DRY: O; SUNNY

SPECIFIC COMMENTS:

I CERTIFY THAT I HAVE FOLLOWED ALL PROTOCOLS AND PROCEDURES AS DESCRIBED IN THE APPLICABLE SAMPLING PROGRAM

5/20/15 DAVID WILK

DATE SIGNATURE

PARAMETERS ABSENT FROM THIS SAMPLING MAY BE A REVISION REQUEST FORM AS REQUIRED BY THE PROJECT MANAGER

APPENDIX B

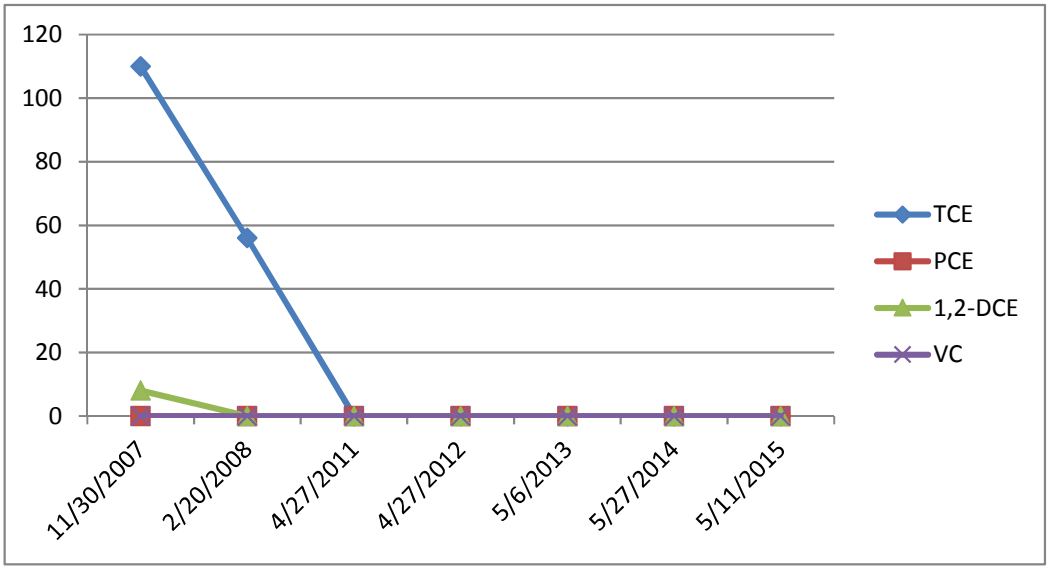
PREVIOUS ANALYTICAL RESULTS & GRAPHS

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	<	<	<	<
5/11/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

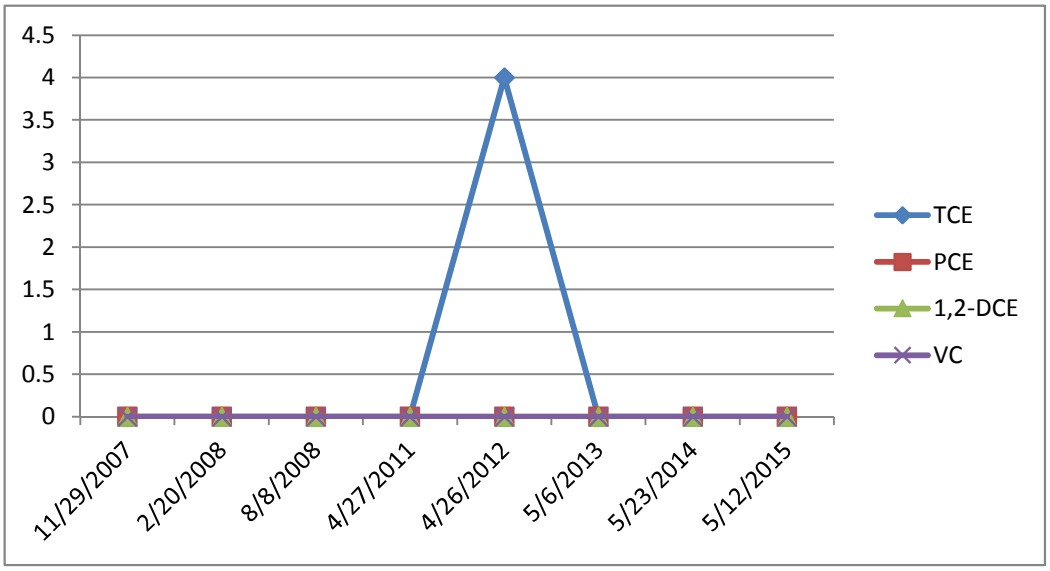


MW-7-2 Groundwater Data

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	<	<	<	<
5/12/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

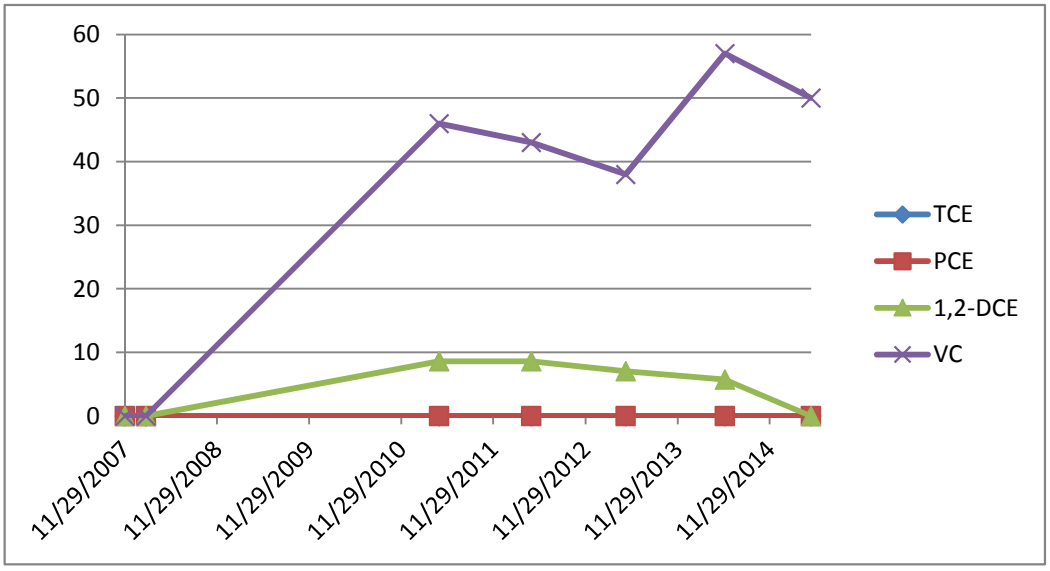


MW-7-3 Groundwater Data

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
5/11/2015	<	<	<	50

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

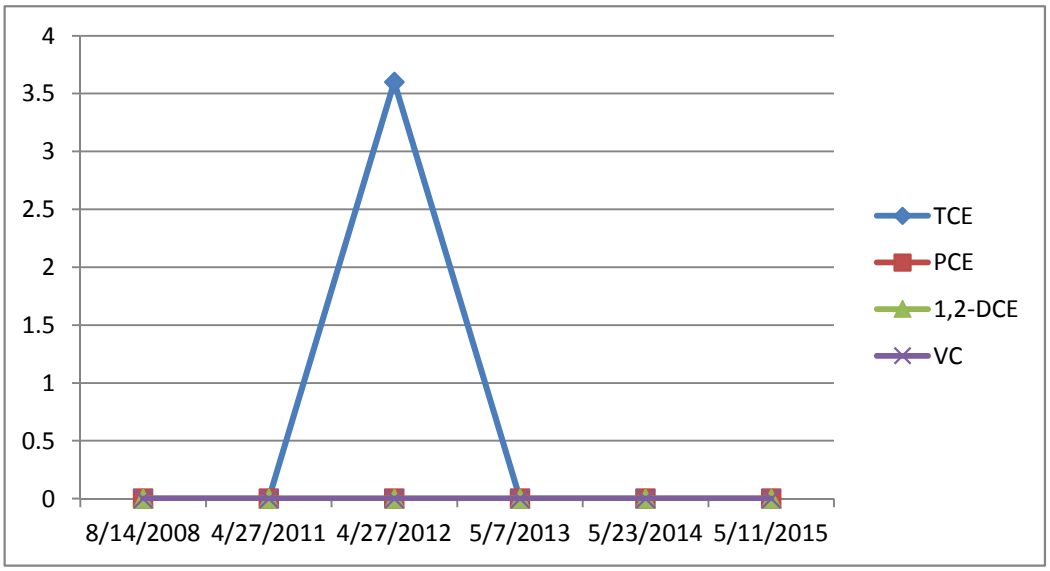


MW-7-4 Groundwater Data

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	<	<	<	<
5/11/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

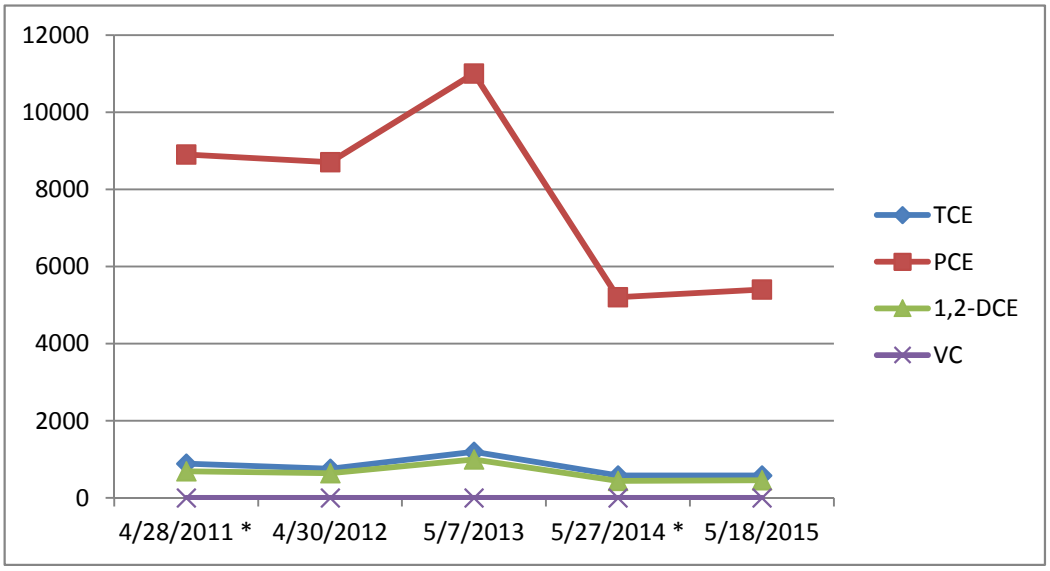


MW-7-5 Groundwater Data

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	5,200	440	<
5/18/2015	580	5,400	460	<

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.

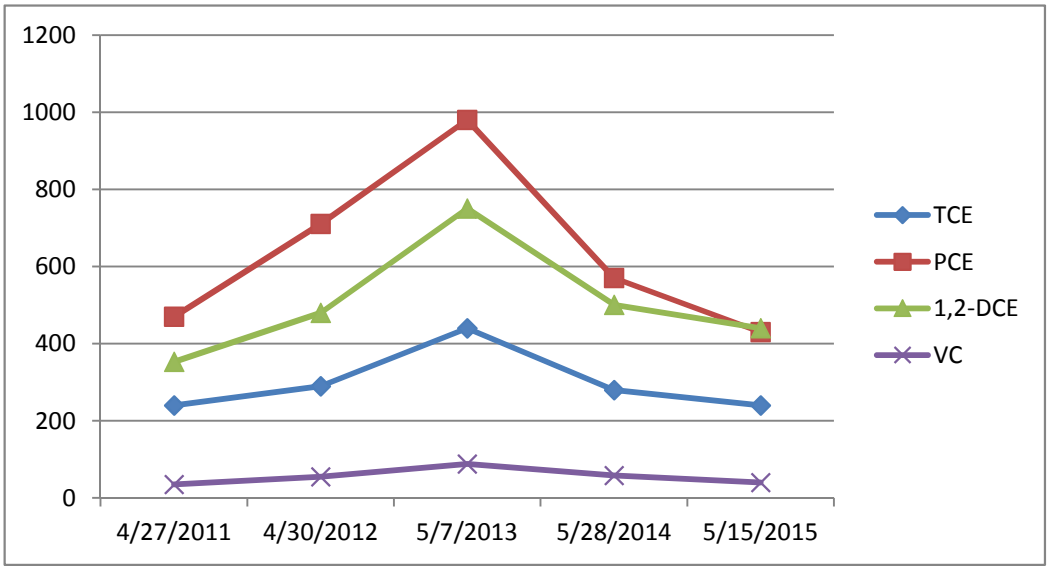


MW-7-6 Groundwater Data

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
5/15/2015	240	430	440	40

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

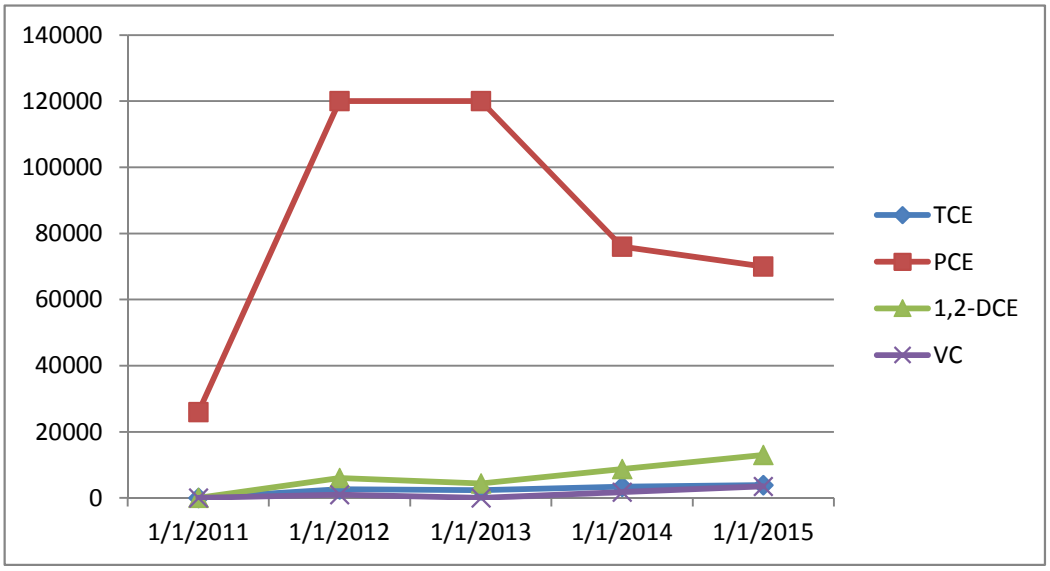


MW-7-7 Groundwater Data

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
5/12/2015	3,900	70,000	13,000	3,500

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

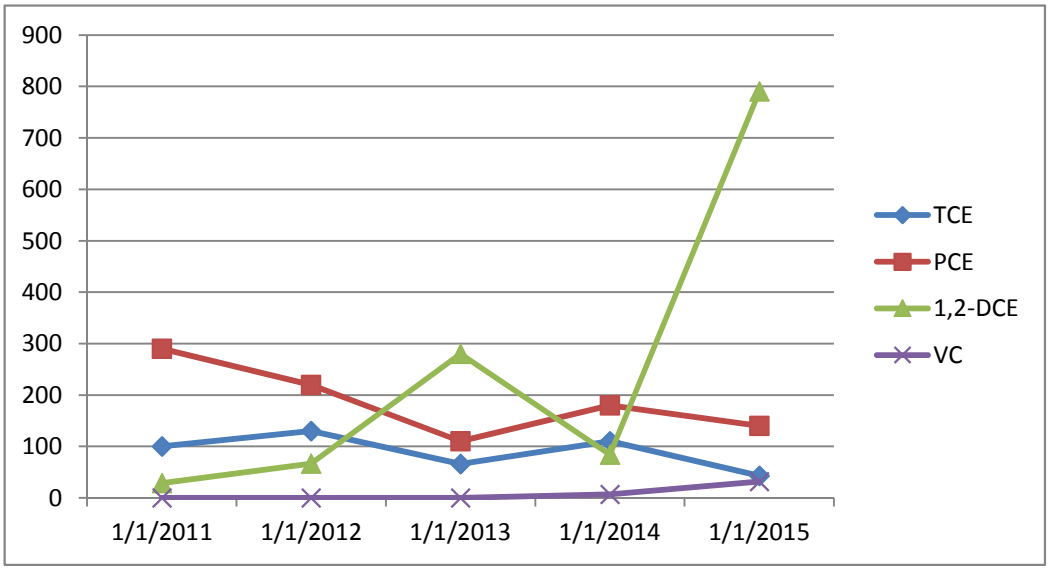


MW-7-8 Groundwater Data

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
5/18/2015	43	140	790	32

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

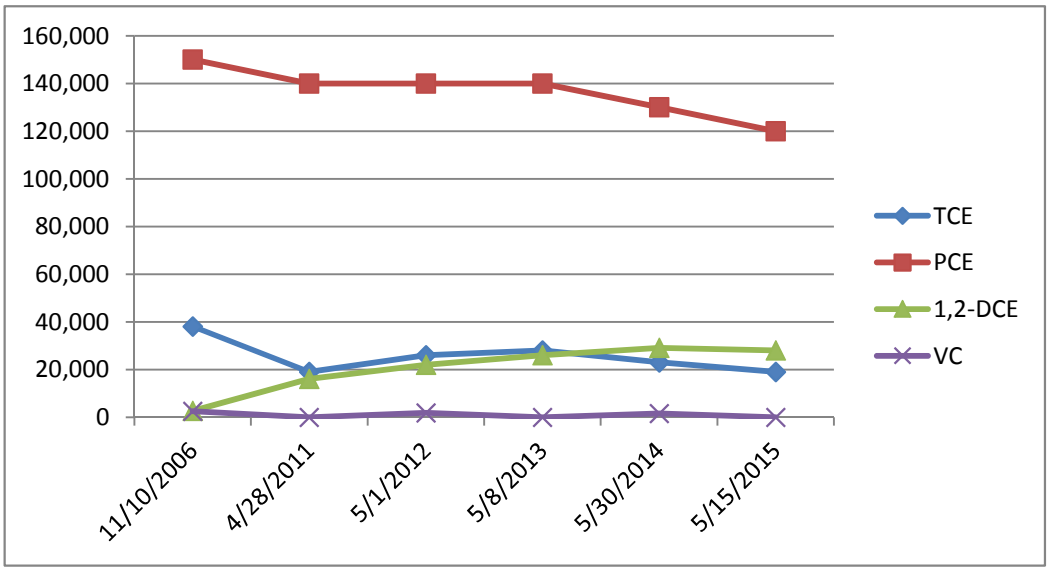


MW-7-A-6 Groundwater Data

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
5/15/2015	19,000	120,000	28,000	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

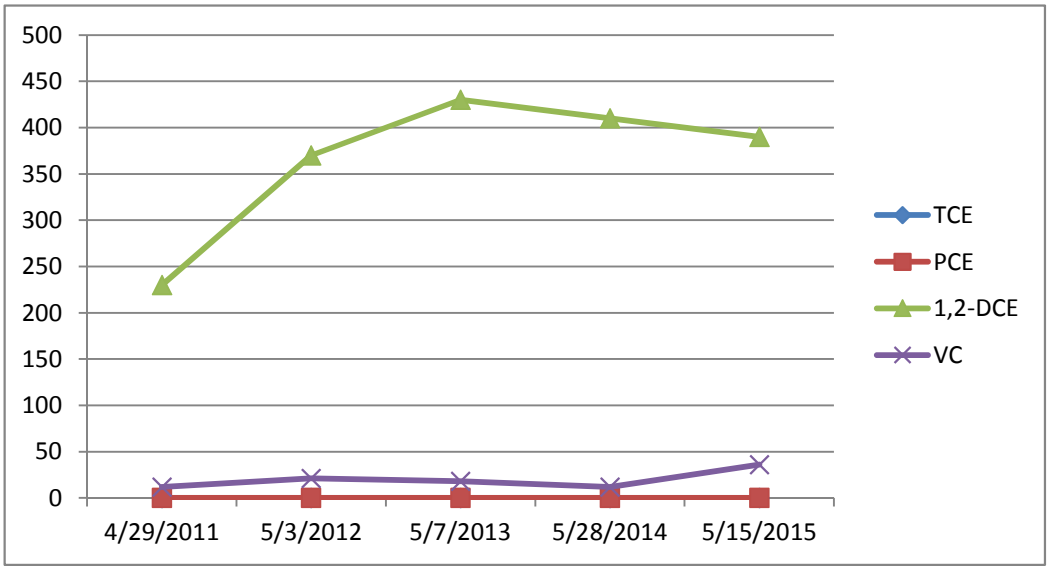


MW-7-C-2 Groundwater Data

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
5/15/2015	<	<	390	36

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

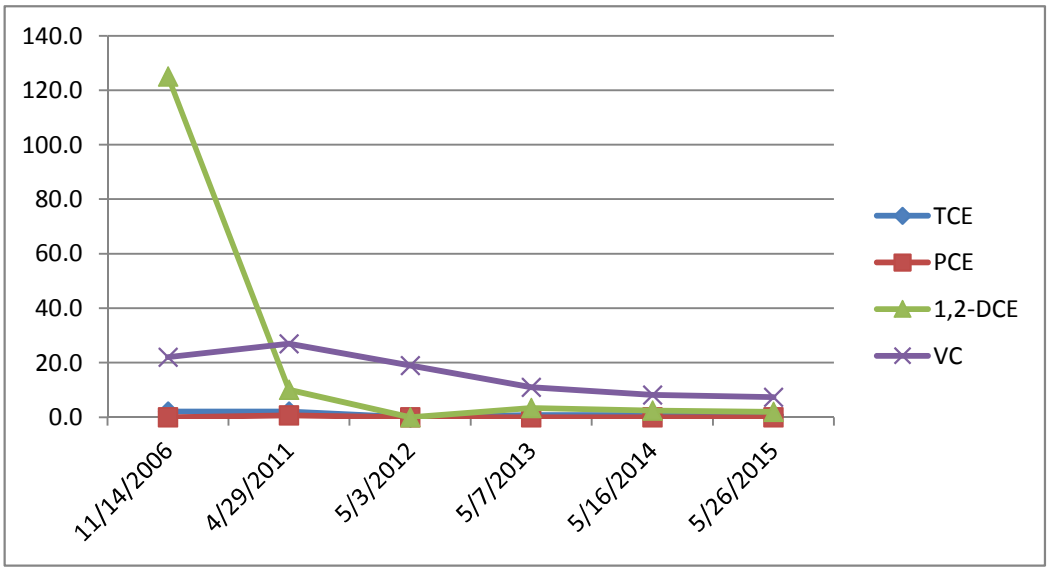


MW-7-P-1 Groundwater Data

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
5/26/2015	0.93	<	2	7.4

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

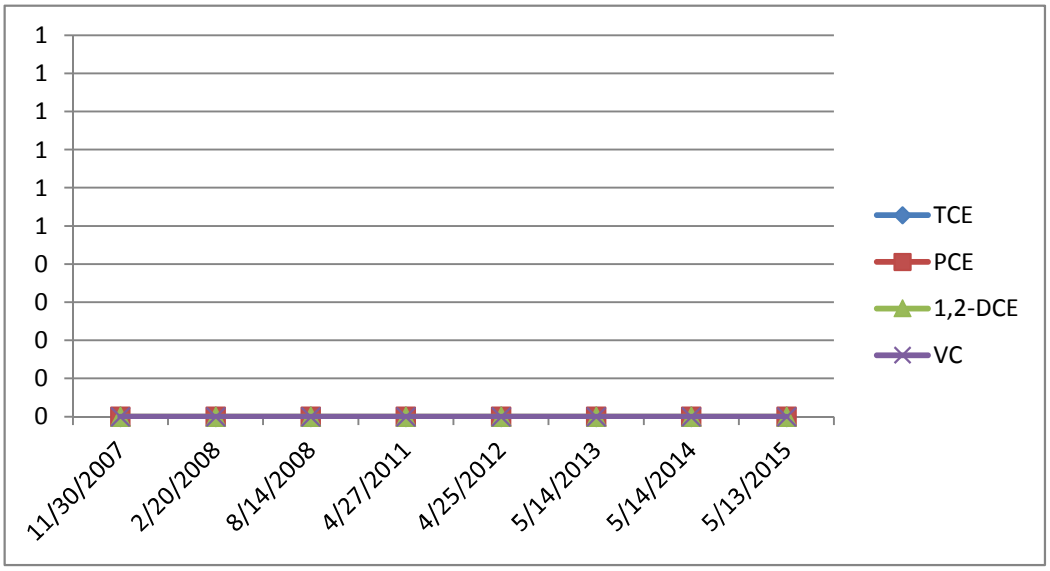


MW-6-1 Groundwater Data

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	<	<	<	<
5/13/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

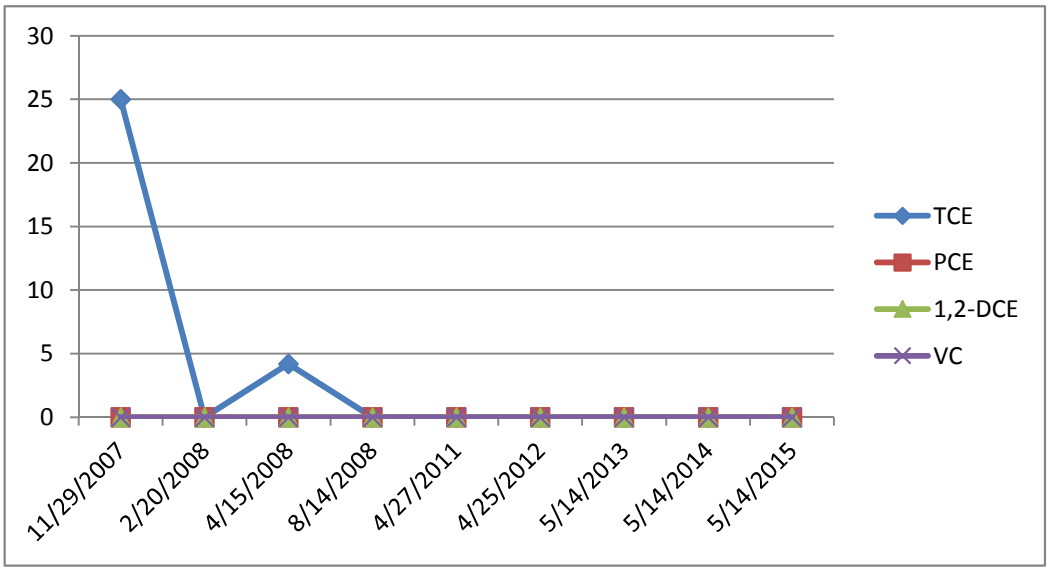


MW-6-2 Groundwater Data

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	<	<	<	<
5/14/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

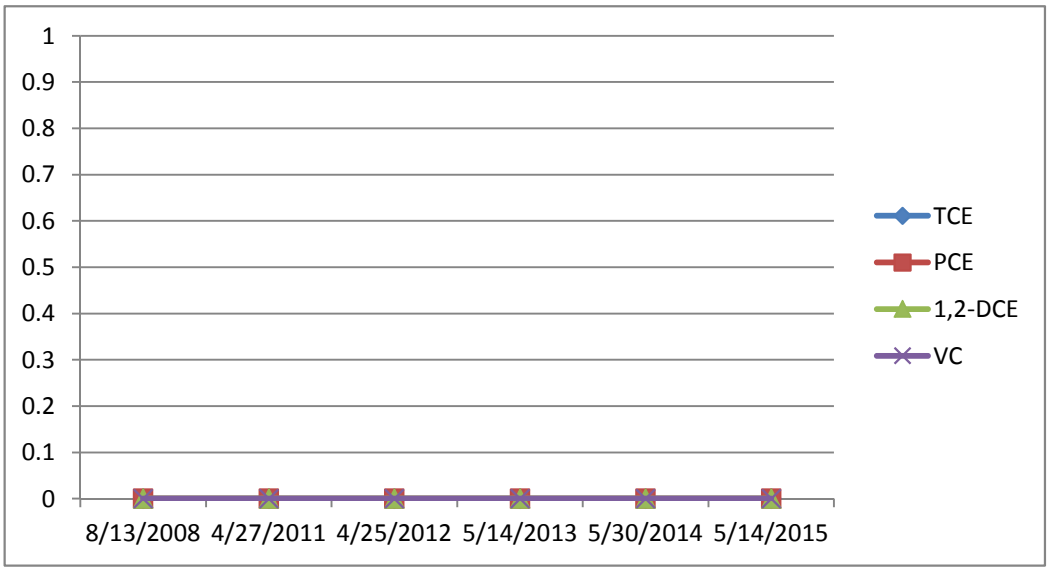


MW-6-F-8 Groundwater Data

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	<	<	<	<
5/14/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

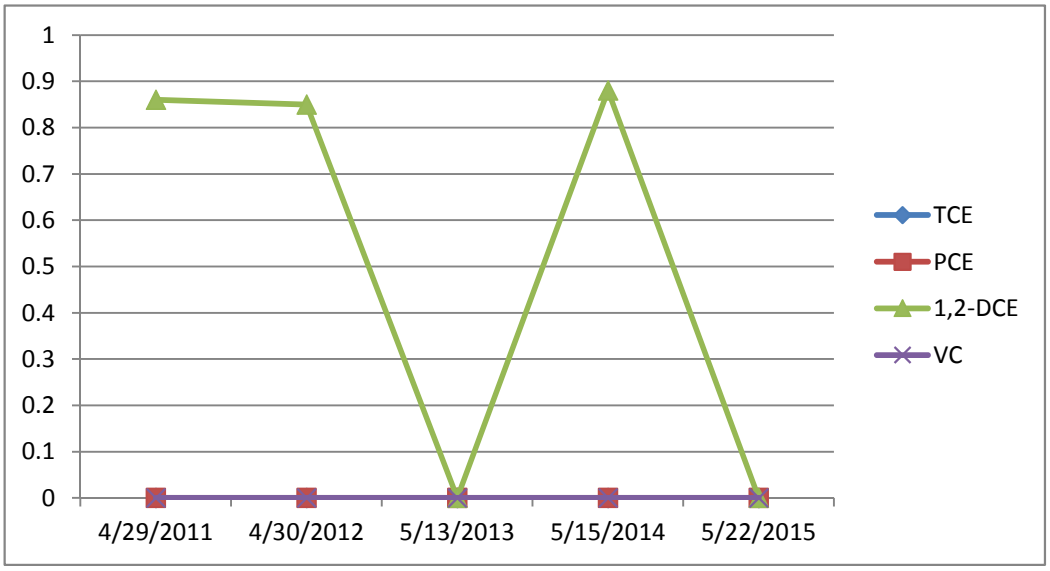


MW-8-1 Groundwater Data

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	<
5/22/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

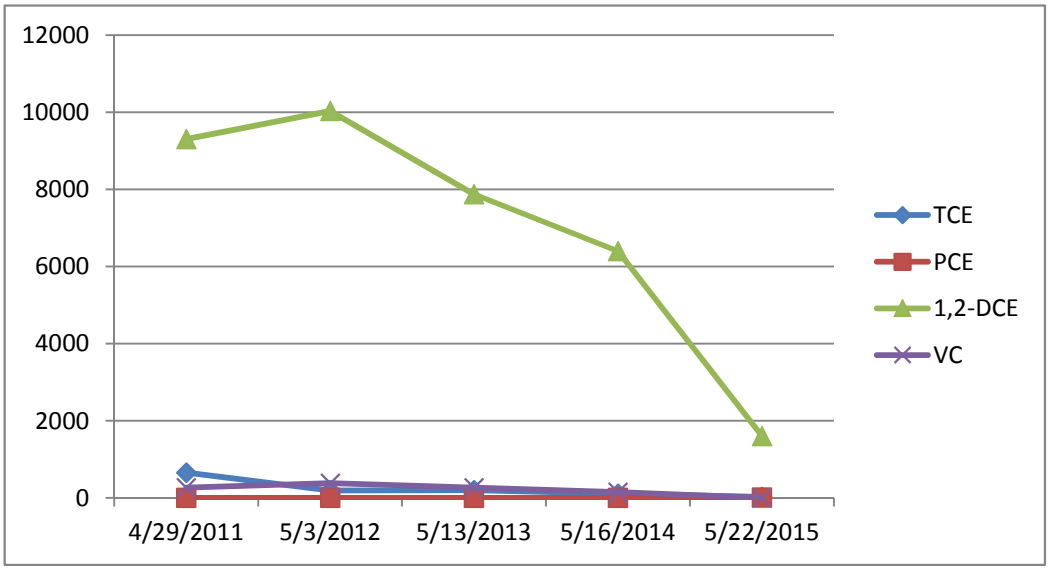


MW-8-2 Groundwater Data

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
5/22/2015	24	10	1,600	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

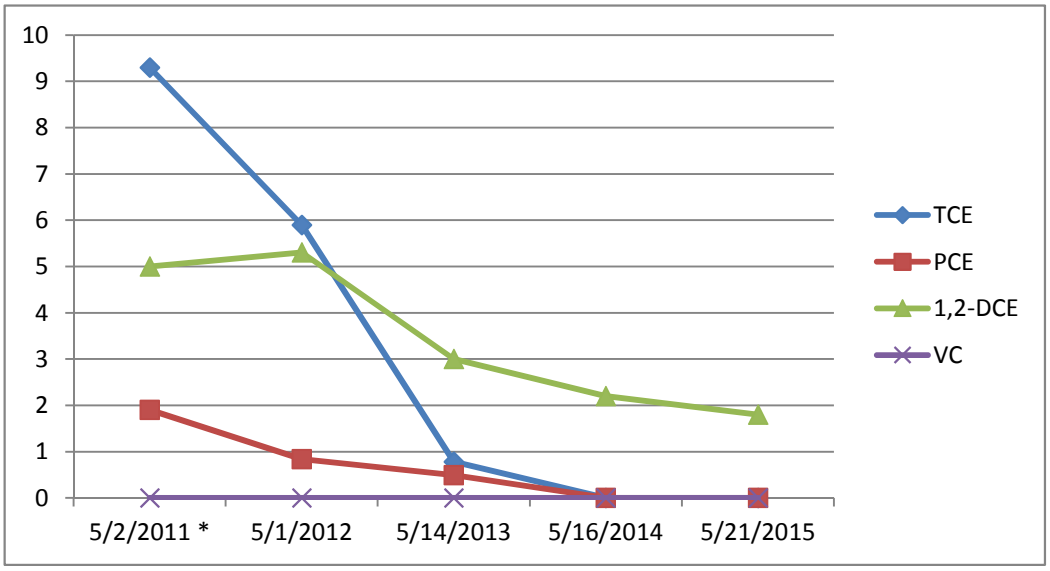


MW-8-3 Groundwater Data

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	<
5/21/2015	<	<	1.8	<

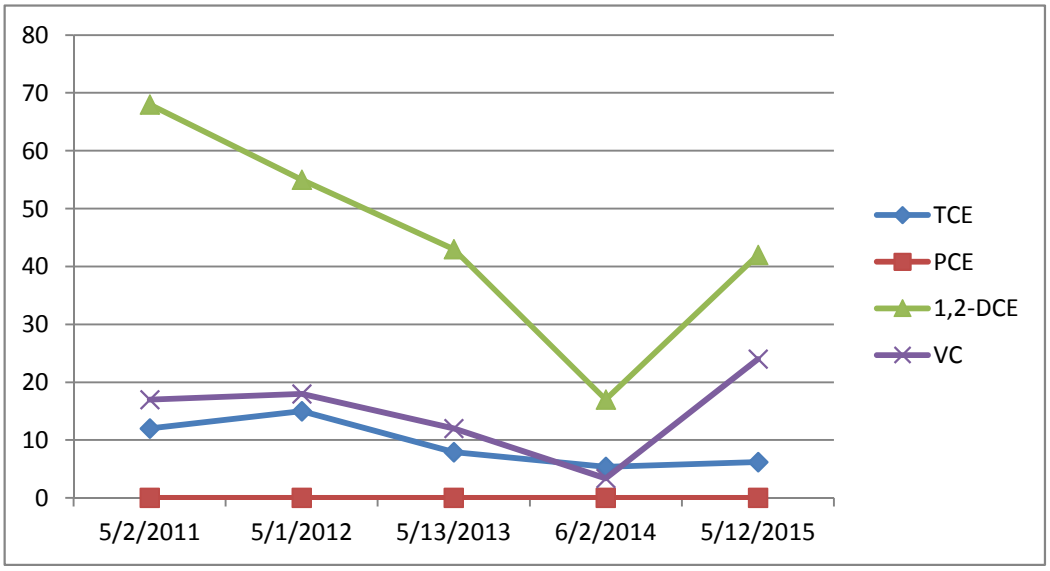
Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result
* = results are the higher of the sample or its respective duplicate sample.



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
5/12/2015	6.2	<	42	24

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

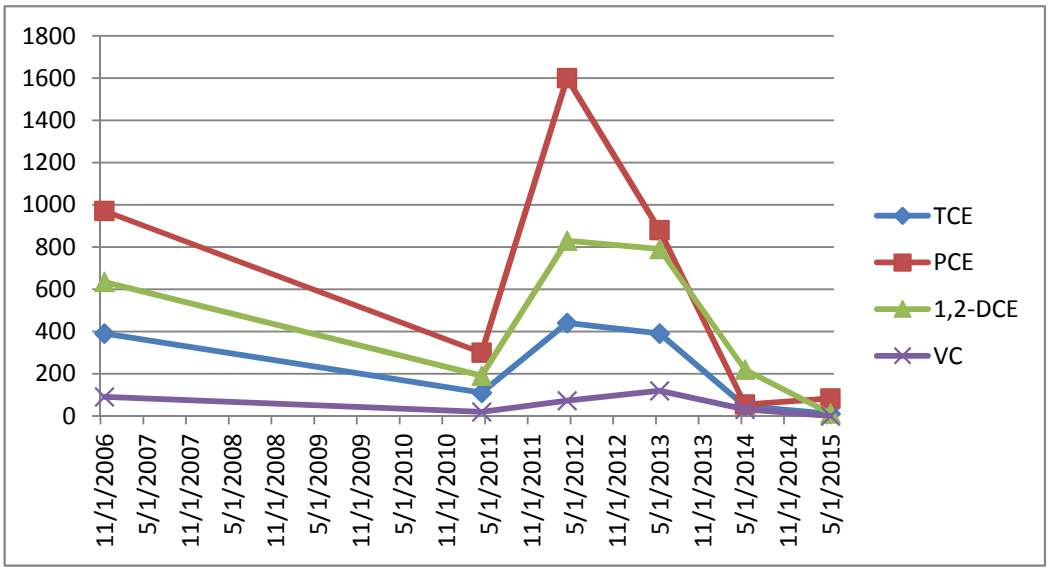


MW-8-003-B Groundwater Data

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	190	19
4/30/2012	440	1,600	830	73
5/10/2013	390	880	790	120
5/29/2014	46	55	220	31
5/14/2015	10	83	12	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

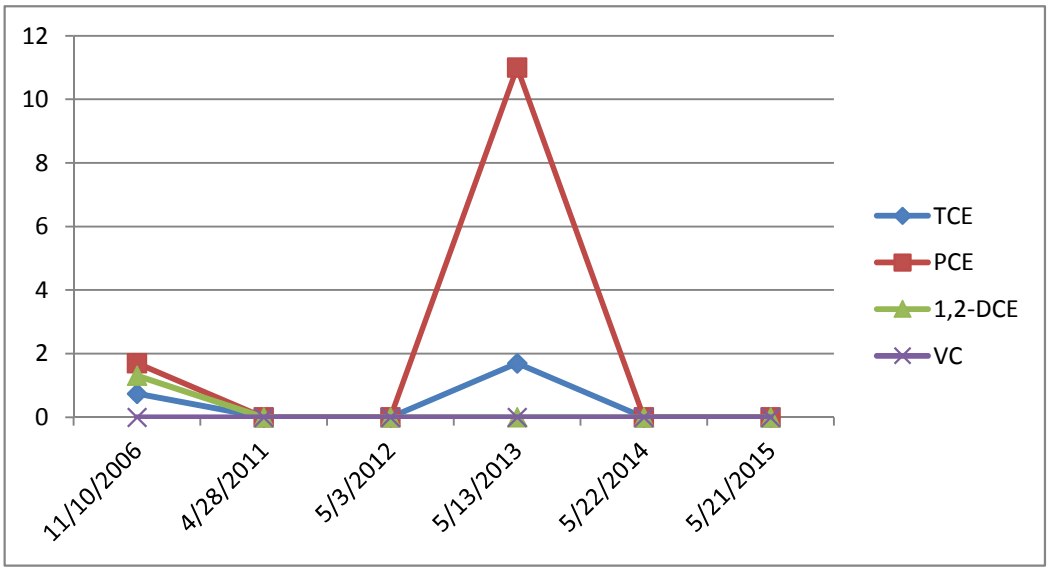


MW-9-101A Groundwater Data

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	<	<	<	<
5/21/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

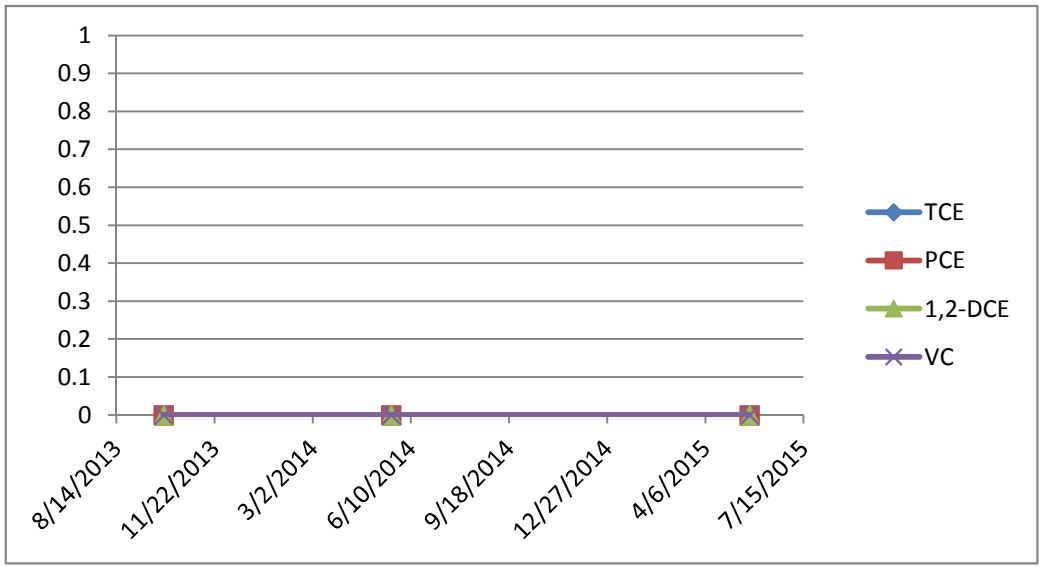


MW-9-12 Groundwater Data

GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/1/2013	<	<	<	<
5/21/2014	<	<	<	<
5/21/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

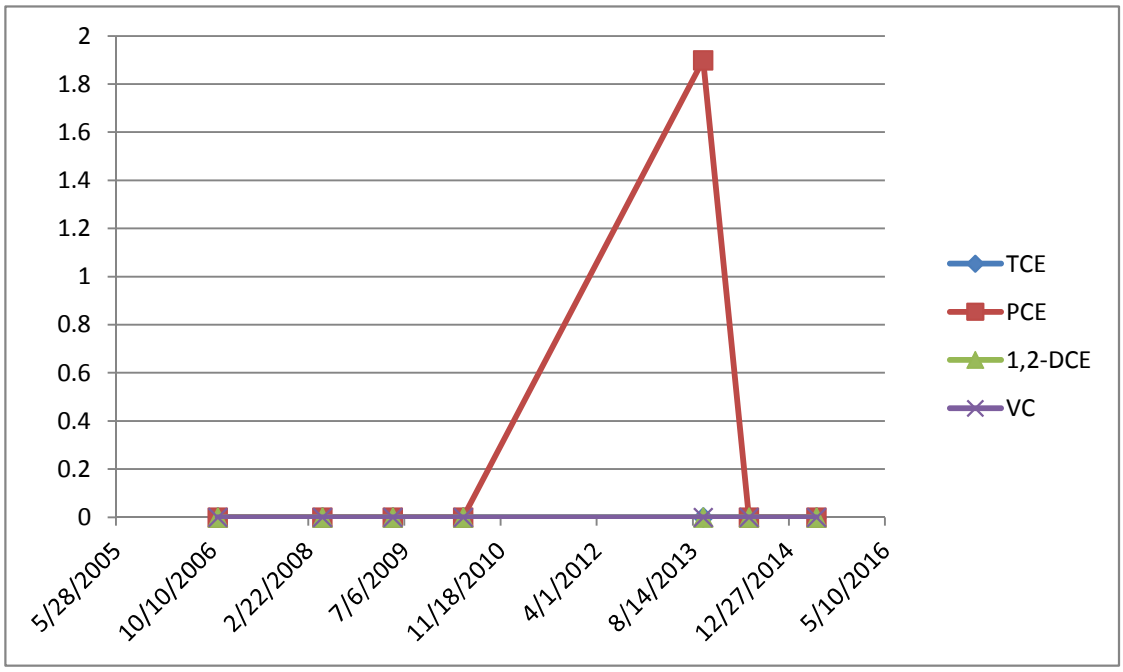


TK-6 Groundwater Data

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	<	<	<	<
5/20/2015	<	<	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

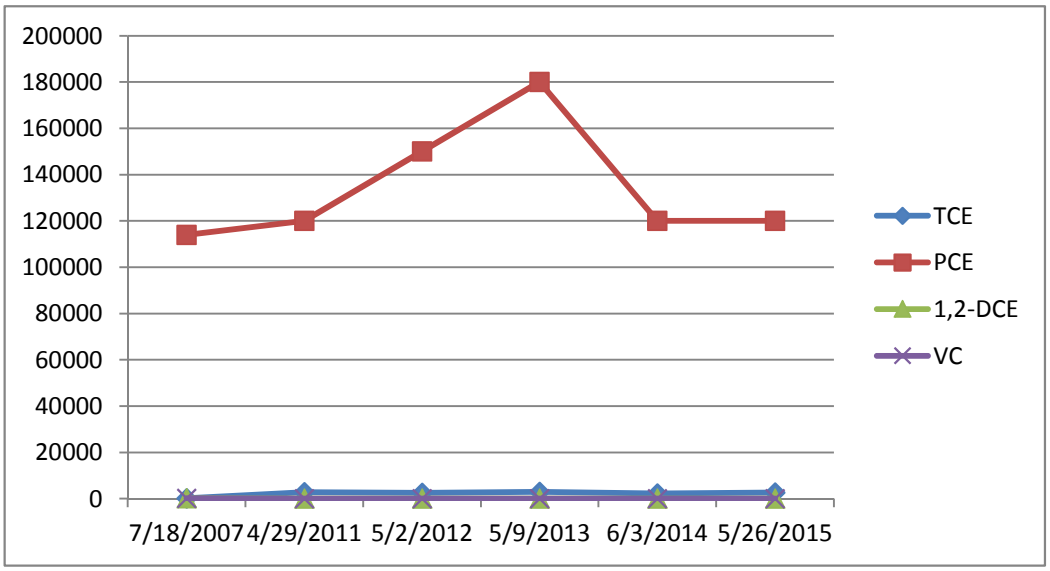


Bldg 10-MW-1 Groundwater Data

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	<	<
5/26/2015	2,600	120,000	<	<

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

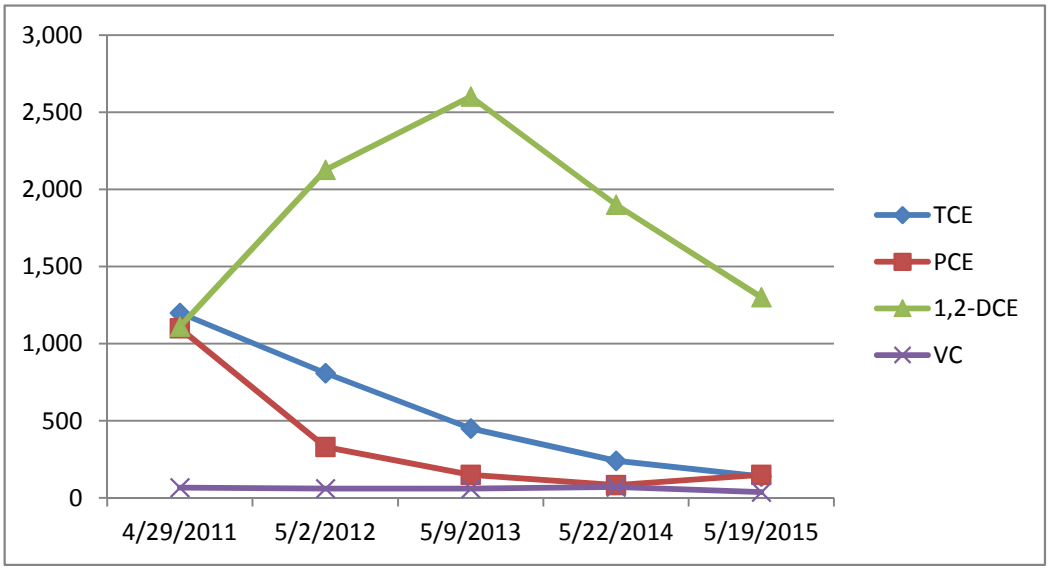


MW-10-2 Groundwater Data

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
5/19/2015	140	150	1,300	38

Notes:
Results are provided in parts per billion (ppb)
< = non-detect laboratory result

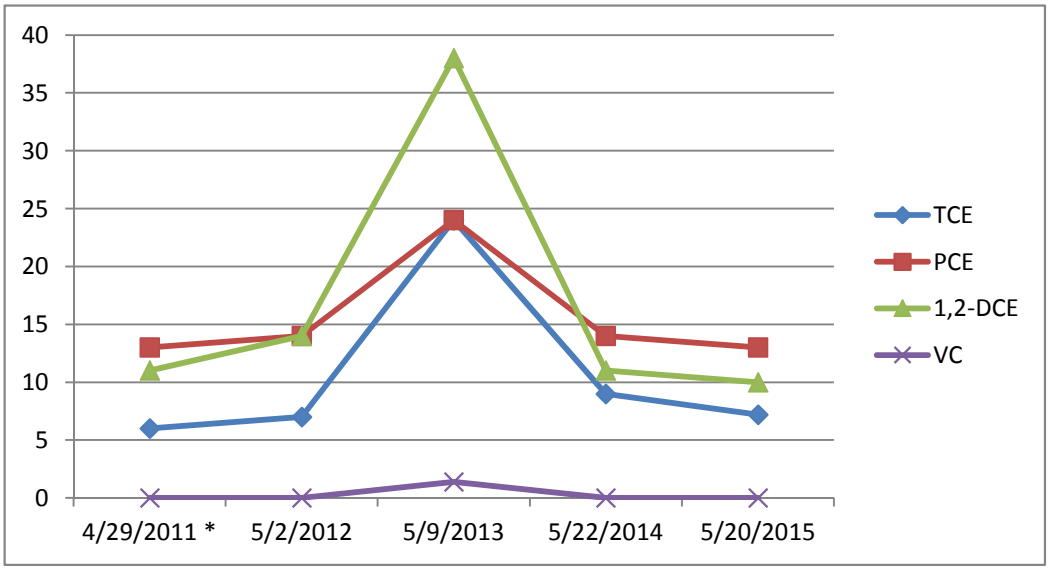


MW-10-3 Groundwater Data

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	<
5/20/2015	7.2	13	10	<

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.



APPENDIX C

DATA QUALITY ASSESSMENT AND VERIFICATION REPORT

Memorandum

To:	Denis Conley	Ref. No.:	058507-256024
From:	Kathy Willy/adh/135	Date:	July 1, 2015

Re: **Analytical Results and Reduced Validation**
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

1. Introduction

The following document details a reduced validation of analytical results for groundwater samples collected in support of the Annual Groundwater Sampling at the GM Lockport Site during May 2015. Samples were submitted to TestAmerica Laboratory, 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 GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

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

i) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", United States Environmental Protection Agency (USEPA) 540-R-10-011, January 2010

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

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

2. Sample Holding Time and Preservation

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

GHD Services Inc.
2055 Niagara Falls Boulevard Suite 3 Niagara Falls New York 14304 USA
T 716 297 6150 **F** 716 297 2265 **W** www.ghd.com

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

3. Laboratory Method Blank Analyses

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

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

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of a low concentration of iron. Associated sample results with concentrations similar to that found in the method blank were qualified as non-detect. A summary of qualified results is presented in Table 4.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample 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. 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. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

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

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

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

7. Field QA/QC Samples

The field QA/QC consisted of 15 trip blank samples and 1 field duplicate sample set.

7.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, 15 trip blanks were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest with the exception of trichloroethene, which was detected in one trip blank sample. Associated sample results with concentrations similar to that found in the trip blank were qualified as non-detect. A summary of qualified results is presented in Table 5.

7.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criterion is one times the PQL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with the exception of vinyl chloride, lactic acid, and acetic acid, which all showed some variability. A summary of qualified results is presented in Table 6.

8. Analyte Reporting

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

9. Conclusion

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

Table 1

Sample Collection and Analysis Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

					Analysis/Parameters											
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Hydrogen**	**Chloride, Sulfate**	**Ammonia**	**Nitrate, Nitrite**	**Dissolved Gases**	**Alkalinity**	**Sulfide**	**Select Metals**	**Select VOCs**	**TOC**	**VFA**	**Comments**
MW-15-050615	MW-15	Water	05/06/2015	10:51	X	X	X	X	X	X	X	X	X	X	X	
MW-11-050615	MW-11	Water	05/06/2015	15:21	X	X	X	X	X	X	X	X	X	X	X	
TRIP BLANK	-	Water	05/06/2015	-									X			Trip Blank
MW-12-050715	MW-12	Water	05/07/2015	10:10	X	X	X	X	X	X	X	X	X	X	X	
MW-14-050715	MW-14	Water	05/07/2015	14:25	X	X	X	X	X	X	X	X	X	X	X	
TRIP BLANK	-	Water	05/07/2015	-									X			Trip Blank
MW-10-050815	MW-10	Water	05/08/2015	09:35	X	X	X	X	X	X	X	X	X	X	X	
MW-4-050815	MW-4	Water	05/08/2015	15:55	X	X	X	X	X	X	X	X	X	X	X	
MW-7-050815	MW-7	Water	05/08/2015	10:30		X	X	X	X	X	X	X	X	X	X	
TRIP BLANK	-	Water	05/08/2015	-									X			Trip Blank
DUPE-1-050815	MW-7	Water	05/08/2015	-		X	X	X	X	X	X	X	X	X	X	Field duplicate of sample MW-7-050815
MW-7-3-051115	MW-7-3	Water	05/11/2015	12:30		X	X	X	X	X	X	X	X	X		
MW-7-1-051115	MW-7-1	Water	05/11/2015	15:45		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/11/2015	-									X			Trip Blank
MW-7-2-051215	MW-7-2	Water	05/12/2015	11:05		X	X	X	X	X	X	X	X	X		
MW-7-4-051215	MW-7-4	Water	05/12/2015	11:30		X	X	X	X	X	X	X	X	X		
MW-8-4-051215	MW-8-4	Water	05/12/2015	15:20		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/12/2015	-									X			Trip Blank
MW-13-051315	MW-13	Water	05/13/2015	11:40	X	X	X	X	X	X	X	X	X	X	X	
TRIP BLANK	-	Water	05/13/2015	-									X			Trip Blank
MW-6-1-051315	MW-6-1	Water	05/13/2015	15:00		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/13/2015	-									X			Trip Blank
MW-6-F-8-051415	MW-6-F-8	Water	05/14/2015	09:45		X	X	X	X	X	X	X	X	X		
MW-6-2-051415	MW-6-2	Water	05/14/2015	14:05		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/14/2015	-									X			Trip Blank
MW-8-003-B-051415	MW-8-003-B	Water	05/14/2015	16:25		X	X	X	X	X	X	X	X	X		
MW-7-C-2-051515	MW-7-C-2	Water	05/15/2015	11:10		X	X	X	X	X	X	X	X	X		
MW-7-6-051515	MW-7-6	Water	05/15/2015	15:10		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/15/2015	-									X			Trip Blank
MW-7-5-051815	MW-7-5	Water	05/18/2015	10:35		X	X	X	X	X	X	X	X	X		
MW-7-A-6-051815	MW-7-A-6	Water	05/18/2015	14:15		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/18/2015	-									X			Trip Blank
MW-7-7-051915	MW-7-7	Water	05/19/2015	11:20		X	X	X	X	X	X	X	X	X		

Table 1

Sample Collection and Analysis Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters: Hydrogen	Chloride, Sulfate	Ammonia	Nitrate, Nitrite	Dissolved Gases	Alkalinity	Sulfide	Select Metals	Select VOCs	TOC	VFA	Comments
MW-10-2-051915	MW-10-2	Water	05/19/2015	14:20		X	X	X	X	X	X	X	X	X		
MW-7-8-051915	MW-7-8	Water	05/19/2015	14:50		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/19/2015	-									X			Trip Blank
MW-10-3-052015	MW-10-3	Water	05/20/2015	11:00		X	X	X	X	X	X	X	X	X		
TK-6-052015	TK-6	Water	05/20/2015	14:30		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/20/2015	-									X			Trip Blank
MW-9-101-A-052115	MW-9-101-A	Water	05/21/2015	09:45		X	X	X	X	X	X	X	X	X		MS/MSD
MW-9-12-052115	MW-9-12	Water	05/21/2015	13:10		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/21/2015	-									X			Trip Blank
MW-8-1-052215	MW-8-1	Water	05/22/2015	10:50		X	X	X	X	X	X	X	X	X		
MW-8-3-052215	MW-8-3	Water	05/22/2015	11:10		X	X	X	X	X	X	X	X	X		
MW-8-2-052215	MW-8-2	Water	05/22/2015	15:00		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/22/2015	-									X			Trip Blank
MW-7-P-1-052615	MW-7-P-1	Water	05/26/2015	10:50		X	X	X	X	X	X	X	X	X		
BLDG-10-MW-1-052615	BLDG-10-MW-1	Water	05/26/2015	15:00		X	X	X	X	X	X	X	X	X		
TRIP BLANK	-	Water	05/26/2015	-									X			Trip Blank

Notes:

MS/MSD - Matrix Spike/Matrix Spike Duplicate
TOC - Total Organic Carbon
VFA - Volatile Fatty Acids

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		BLDG-10-MW-1	MW-4	MW-6-1	MW-6-2	MW-6-F-8	MW-7	MW-7
Sample ID:		BLDG-10-MW-1-052615	MW-4-050815	MW-6-1-051315	MW-6-2-051415	MW-6-F-8-051415	DUPE-1-050815	MW-7-050815
Sample Date:		5/26/2015	5/8/2015	5/13/2015	5/14/2015	5/14/2015	5/8/2015 (Duplicate)	5/8/2015
Parameters	**Units**							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	2000 U	30000	1.0 U	1.0 U	1.0 U	45000	40000
Tetrachloroethene	µg/L	120000	3.1	1.0 U	1.0 U	1.0 U	130	140
trans-1,2-Dichloroethene	µg/L	2000 U	100	1.0 U	1.0 U	1.0 U	110	92
Trichloroethene	µg/L	2600	27000	1.0 U	1.0 U	1.0 U	830000	710000
Vinyl chloride	µg/L	2000 U	3800	1.0 U	1.0 U	1.0 U	3000 J	1600 J
Metals								
Iron	mg/L	1.2	0.70	12.3	0.036 J	0.050 U	0.41	0.39
Magnesium	mg/L	95.6	65.8	48.3	56.3	195	42.0	41.4
Manganese	mg/L	0.44	0.38	1.8	0.21	0.24	0.019	0.019
Gas								
Carbon dioxide	µg/L	17000	9700	22000	14000	15000	3600	3500
Ethane	µg/L	7.5 U	32 J	7.5 U	7.5 U	7.5 U	16	14
Ethene	µg/L	7.0 U	230	7.0 U	7.0 U	7.0 U	91	79
Hydrogen	nM	-	1.7	-	-	-	-	-
Methane	µg/L	13	530	8.3	4.0 U	6.8	25	21
General Chemistry								
Acetic acid	mg/L	-	10.0 U	-	-	-	5.4 J	2.5 J
Alkalinity, total (as CaCO3)	mg/L	303	304	399	399	364	244	244
Ammonia	mg/L	0.13	1.6	0.48	0.13	0.015 J	0.70	0.70
Butanoic acid	mg/L	-	10.0 U	-	-	-	1.0 U	10.0 U
Chloride	mg/L	501	1660	869	1800	2930	298	300
Formic acid	mg/L	-	10.0 U	-	-	-	0.67 J	10.0 U
Lactic acid	mg/L	-	10.0 U	-	-	-	6.5 J	2.7 J
Nitrate (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.090	0.17	0.050 U	0.050 U
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
Propionic acid	mg/L	-	13.0	-	-	-	33.4	10.0 U
Pyruvic acid	mg/L	-	10.0 U	-	-	-	1.0 U	10.0 U
Sulfate	mg/L	215	228	18.2 J	91.1 J	280	142	143

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		BLDG-10-MW-1	MW-4	MW-6-1	MW-6-2	MW-6-F-8	MW-7	MW-7
Sample ID:		BLDG-10-MW-1-052615	MW-4-050815	MW-6-1-051315	MW-6-2-051415	MW-6-F-8-051415	DUPE-1-050815	MW-7-050815
Sample Date:		5/26/2015	5/8/2015	5/13/2015	5/14/2015	5/14/2015	5/8/2015 (Duplicate)	5/8/2015
Parameters	**Units**							
General Chemistry-Continued								
Sulfide	mg/L	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	4.2	2.3	3.7	2.3	1.4	9.5	9.4

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-7-1	MW-7-2	MW-7-3	MW-7-4	MW-7-5	MW-7-6	MW-7-7
Sample ID:		MW-7-1-051115	MW-7-2-051215	MW-7-3-051115	MW-7-4-051215	MW-7-5-051815	MW-7-6-051515	MW-7-7-051915
Sample Date:		5/11/2015	5/12/2015	5/11/2015	5/12/2015	5/18/2015	5/15/2015	5/19/2015
Parameters	**Units**							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	10 U	1.0 U	460	440	13000
Tetrachloroethene	µg/L	1.0 U	1.0 U	10 U	1.0 U	5400	430	70000
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	10 U	1.0 U	100 U	10 U	1000 U
Trichloroethene	µg/L	1.0 U	1.0 U	10 U	1.0 U	580	240	3900
Vinyl chloride	µg/L	1.0 U	1.0 U	50	1.0 U	100 U	40	3500
Metals								
Iron	mg/L	0.071	0.050 U	3.4	0.19	0.13	0.092	0.11
Magnesium	mg/L	106	30.2	234	30.2	142	85.9	169
Manganese	mg/L	0.34	0.0058	0.35	0.0053	1.1	0.19	0.024
Gas								
Carbon dioxide	µg/L	14000	6300	17000	6200	20000	8800	1000 U
Ethane	µg/L	7.5 U	7.5 U	75 U	7.5 U	7.5 U	1.8 J	18 J
Ethene	µg/L	7.0 U	7.0 U	70 U	7.0 U	7.0 U	7.0 U	290
Hydrogen	nM	-	-	-	-	-	-	-
Methane	µg/L	6.1	4.0 U	100	4.0 U	3.4 J	36	340
General Chemistry								
Acetic acid	mg/L	-	-	-	-	-	-	-
Alkalinity, total (as CaCO3)	mg/L	329	305	328	334	357	337	228
Ammonia	mg/L	0.020 U	0.020 U	2.8	0.020 U	0.020 U	0.092	0.20
Butanoic acid	mg/L	-	-	-	-	-	-	-
Chloride	mg/L	1630	90.0	8280	251	4430	4620	2430
Formic acid	mg/L	-	-	-	-	-	-	-
Lactic acid	mg/L	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	0.028 J	0.050 U	0.026 J	0.058	2.0	0.050 U	0.083
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.045 J	0.050 U	0.067
Propionic acid	mg/L	-	-	-	-	-	-	-
Pyruvic acid	mg/L	-	-	-	-	-	-	-
Sulfate	mg/L	124	25.5	776	39.0 J	285 J	100 J	297

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-7-1	MW-7-2	MW-7-3	MW-7-4	MW-7-5	MW-7-6	MW-7-7
Sample ID:		**MW-7-1-051115**	**MW-7-2-051215**	**MW-7-3-051115**	**MW-7-4-051215**	**MW-7-5-051815**	**MW-7-6-051515**	**MW-7-7-051915**
Sample Date:		**5/11/2015**	**5/12/2015**	**5/11/2015**	**5/12/2015**	**5/18/2015**	**5/15/2015**	**5/19/2015**
Parameters	**Units**							
General Chemistry-Continued								
Sulfide	mg/L	0.10 U	0.10 U	0.095 J	0.10 U	0.10 U	0.10 U	1.9
Total organic carbon (TOC)	mg/L	1.6	1.5	1.7	1.2	3.4	2.2	14.3

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-7-8	MW-7-A-6	MW-7-C-2	MW-7-P-1	MW-8-1	MW-8-2	MW-8-3
Sample ID:		MW-7-8-051915	MW-7-A-6-051815	MW-7-C-2-051515	MW-7-P-1-052615	MW-8-1-052215	MW-8-2-052215	MW-8-3-052215
Sample Date:		5/19/2015	5/18/2015	5/15/2015	5/26/2015	5/22/2015	5/22/2015	5/22/2015
Parameters	**Units**							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	790	28000	390	2.0	1.0 U	1600	1.8
Tetrachloroethene	µg/L	140	120000	5.0 U	1.0 U	1.0 U	10 J	1.0 U
trans-1,2-Dichloroethene	µg/L	3.8 J	5000 U	5.0 U	2.3	1.0 U	25 U	1.0 U
Trichloroethene	µg/L	43	19000	5.0 U	0.93 J	1.0 U	24 J	1.0 U
Vinyl chloride	µg/L	32	5000 U	36	7.4	1.0 U	25 U	1.0 U
Metals								
Iron	mg/L	18.5	0.28	0.40	72.9	0.040 J	0.065	1.0
Magnesium	mg/L	230	124	111	457	102	36.9	61.0
Manganese	mg/L	0.45	1.1	0.19	9.1	0.12	0.0046	4.1
Gas								
Carbon dioxide	µg/L	6400	21000	9000	32000	13000	3700	8500
Ethane	µg/L	14	11	7.5 U	54	41 J	7.5 U	7.5 U
Ethene	µg/L	1.6 J	79	7.0 U	7.0 U	45 J	7.0 U	7.0 U
Hydrogen	nM	-	-	-	-	-	-	-
Methane	µg/L	46	400	68	6300	370	2.7 J	23
General Chemistry								
Acetic acid	mg/L	-	-	-	-	-	-	-
Alkalinity, total (as CaCO3)	mg/L	84.0	451	294	213	288	345	318
Ammonia	mg/L	0.12	0.074	0.48	132	1.2	0.092	1.8
Butanoic acid	mg/L	-	-	-	-	-	-	-
Chloride	mg/L	3550	937	246	4730	1430	361	1930
Formic acid	mg/L	-	-	-	-	-	-	-
Lactic acid	mg/L	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.46	0.14
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.052	0.050 U
Propionic acid	mg/L	-	-	-	-	-	-	-
Pyruvic acid	mg/L	-	-	-	-	-	-	-
Sulfate	mg/L	270	69.4 J	639	400 U	531	177	27.8 J

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-7-8	MW-7-A-6	MW-7-C-2	MW-7-P-1	MW-8-1	MW-8-2	MW-8-3
Sample ID:		**MW-7-8-051915**	**MW-7-A-6-051815**	**MW-7-C-2-051515**	**MW-7-P-1-052615**	**MW-8-1-052215**	**MW-8-2-052215**	**MW-8-3-052215**
Sample Date:		**5/19/2015**	**5/18/2015**	**5/15/2015**	**5/26/2015**	**5/22/2015**	**5/22/2015**	**5/22/2015**
Parameters	**Units**							
General Chemistry-Continued								
Sulfide	mg/L	0.10 U	0.10 U	0.10 U	0.10 U	2.6	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	1.5	10.2	1.7	6.7	1.3	2.0	7.7

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-8-003-B	MW-8-4	MW-9-12	MW-9-101-A	MW-10	MW-10-2	MW-10-3
Sample ID:		MW-8-003-B-051415	MW-8-4-051215	MW-9-12-052115	MW-9-101-A-052115	MW-10-050815	MW-10-2-051915	MW-10-3-052015
Sample Date:		5/14/2015	5/12/2015	5/21/2015	5/21/2015	5/8/2015	5/19/2015	5/20/2015
Parameters	**Units**							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	12	42	1.0 U	1.0 U	310	1300	10
Tetrachloroethene	µg/L	83	5.0 U	1.0 U	1.0 U	4.0 U	150	13
trans-1,2-Dichloroethene	µg/L	2.0 U	5.0 U	1.0 U	1.0 U	4.0 U	18 J	1.0 U
Trichloroethene	µg/L	10	6.2	1.0 U	1.0 U	110	140	7.2
Vinyl chloride	µg/L	2.0 U	24	1.0 U	1.0 U	48	38	1.0 U
Metals								
Iron	mg/L	0.65	2.4	0.028 J	0.050 U	0.035 J	0.055	0.050 U
Magnesium	mg/L	4.5	124	30.8	113	40.5	71.0	31.1
Manganese	mg/L	0.056	1.1	0.17	0.0014 J	1.3	0.10	0.0030 U
Gas								
Carbon dioxide	µg/L	1000 U	3700	4900	4100	7900	6900	1400
Ethane	µg/L	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
Hydrogen	nM	-	-	-	-	1.4	-	-
Methane	µg/L	4.0 U	80	4.0 U	4.0 U	55	32	4.0 U
General Chemistry								
Acetic acid	mg/L	-	-	-	-	10.0 U	-	-
Alkalinity, total (as CaCO3)	mg/L	163	159	225	182	260	348	138
Ammonia	mg/L	0.045	0.14	0.020 U	0.020 U	0.021	0.38	0.020 U
Butanoic acid	mg/L	-	-	-	-	10.0 U	-	-
Chloride	mg/L	775	5670	908	2620	1720	1940	341
Formic acid	mg/L	-	-	-	-	10.0 U	-	-
Lactic acid	mg/L	-	-	-	-	10.0 U	-	-
Nitrate (as N)	mg/L	0.23	0.022 J	0.082	3.9	0.050 U	0.034 J	1.7
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.025 J
Propionic acid	mg/L	-	-	-	-	12.5	-	-
Pyruvic acid	mg/L	-	-	-	-	10.0 U	-	-
Sulfate	mg/L	71.1 J	459	64.0 J	981	346	210	203

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-8-003-B	MW-8-4	MW-9-12	MW-9-101-A	MW-10	MW-10-2	MW-10-3
Sample ID:		MW-8-003-B-051415	MW-8-4-051215	MW-9-12-052115	MW-9-101-A-052115	MW-10-050815	MW-10-2-051915	MW-10-3-052015
Sample Date:		5/14/2015	5/12/2015	5/21/2015	5/21/2015	5/8/2015	5/19/2015	5/20/2015
Parameters	**Units**							
General Chemistry-Continued								
Sulfide	mg/L	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	2.9	2.0	1.9	3.5	3.2	1.9	1.9

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-11	MW-12	MW-13	MW-14	MW-15	TK-6
Sample ID:		MW-11-050615	MW-12-050715	MW-13-051315	MW-14-050715	MW-15-050615	TK-6-052015
Sample Date:		5/6/2015	5/7/2015	5/13/2015	5/7/2015	5/6/2015	5/20/2015
Parameters	**Units**						
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	1.1	1.0 U	1.0 U	130	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.1	5.4	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	5.1	0.50 J	1.0 U
Vinyl chloride	µg/L	1.6	1.0 U	1.0 U	76	1.0 U	1.0 U
Metals							
Iron	mg/L	0.13	0.028 J	5.9	11.3	0.050 U	0.050 U
Magnesium	mg/L	48.2	60.1	61.7	81.7	44.8	32.7
Manganese	mg/L	0.082	0.26	5.8	7.9	0.13	0.0030 U
Gas							
Carbon dioxide	µg/L	3900	6100	8800	17000	16000	6200
Ethane	µg/L	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
Hydrogen	nM	1.3	1.6	2.1	1.7	7.7	-
Methane	µg/L	25	48	29	270	17	4.0 U
General Chemistry							
Acetic acid	mg/L	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	-
Alkalinity, total (as CaCO3)	mg/L	28.0	796	299	468	448	346
Ammonia	mg/L	0.27	0.12	1.2	1.8	0.020 U	0.020 U
Butanoic acid	mg/L	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	-
Chloride	mg/L	367	1390	2390	2590	730	765
Formic acid	mg/L	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	-
Lactic acid	mg/L	1.1	10.0 U	10.0 U	10.0 U	1.5	-
Nitrate (as N)	mg/L	0.12	0.036 J	0.48	0.050 U	0.70	0.86
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.058	0.050 U	0.050 U	0.050 U
Propionic acid	mg/L	40.1	48.0	10.0 U	27.5	1.0 U	-
Pyruvic acid	mg/L	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	-
Sulfate	mg/L	121	58.9 J	264	123 J	77.0 J	247

Table 2

Analytical Results Summary
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Sample Location:		MW-11	MW-12	MW-13	MW-14	MW-15	TK-6
Sample ID:		**MW-11-050615**	**MW-12-050715**	**MW-13-051315**	**MW-14-050715**	**MW-15-050615**	**TK-6-052015**
Sample Date:		**5/6/2015**	**5/7/2015**	**5/13/2015**	**5/7/2015**	**5/6/2015**	**5/20/2015**
Parameters	**Units**						
General Chemistry-Continued							
Sulfide	mg/L	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	2.2	5.5	3.4	2.5	1.4

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
\- - Not analyzed

Table 3

Analytical Methods and Holding Time Criteria
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Parameter	Method	Matrix	Holding Time	
			Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
TCL VOC	SW-846 8260[1]	Water	-	14
Total Organic Carbon	SW 846 9060[1]	Water	-	28
Sulfide	EPA 376.1[3]	Water	-	7
Total Nitrogen (as ammonia)	EPA 350.1[3]	Water	-	28
Chloride, Sulfate	EPA 300[3]	Water	-	28
Nitrite, Nitrate	EPA 353.2[3]	Water	-	48 hours
Alkalinity	SM 2320[2]	Water	-	14
Methane, Ethane, Ethene, Carbon dioxide	RSK 175	Water	-	14
Hydrogen	AM20GAX	Water	-	14
Select Metals	SW-846 6010B1	Water	-	180

Notes:

[1] SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
[2] SM - "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions
[3] EPA - "Methods for Chemical Analysis of Water and Wastes", USEPA-600/4-79-020, March 1983 with subsequent revisions
TCL - Target Compound List
VOC - Volatile Organic Compounds

Table 4

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Parameter	Analyte	Analysis Date	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Metals	Iron	05/13/2015	0.0219 J	MW-7-2-051215	0.03 J	0.05 U	mg/L

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
* - Blank result adjusted for sample factors where applicable

Table 5

Qualified Sample Data Due to Analyte Concentrations in the Trip Blanks
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Parameter	Blank Date	Analyte	Blank Result	Associated Sample ID	Original Result	Qualified Result	Units
VOCs	05/08/2015	Trichloroethene	94	MW-10-050815	110	110 U	µg/L

Notes:

U - Not detected at the associated reporting limit
VOCs - Volatile Organic Compounds

Table 6

Qualified Sample Data Due to Variability in Field Duplicate Results
Annual Groundwater Sampling
General Motors Corporation
Lockport, New York
May 2015

Parameter	Analyte	RPD/Diff		Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
Volatile Organic Compounds	Vinyl chloride	61	-	MW-7-050815	1600 J	DUPE-1-050815	3000 J	µg/L
Volatile Fatty Acids	Lactic acid	82.6	-	MW-7-050815	2.7 J	DUPE-1-050815	6.5 J	mg/L
Volatile Fatty Acids	Acetic acid	73.4	-	MW-7-050815	2.5 J	DUPE-1-050815	5.4 J	mg/L

Notes:

Diff - Difference (i.e., >1X RL for waters or >2XRL for soils)
RPD - Relative Percent Difference
J - Estimated concentration

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	0	3	0	0	3	0	3	3	0
DO	>5 mg/l	-3																								
Nitrate	<1 mg/L	2	2	0	2	2	0	0	2	0	0	0	0	0	2	2	0	2	2	2	2	0	2	2	0	2	0
Iron II	>1 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
Sulfate	<20 mg/L	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulfide	>1 mg/L	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Methane	<0.5 mg/L	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Methane	>0.5 mg/L	3																									
ORP	<50 mV	1	1	0	1	0	0	1	2	2	1	1	2	2	0	0	2	2	1	1	0	0	0	0	1	1	0
ORP	<-100 mV	2																									
pH	5< pH <9	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
pH	5> pH >10	-2																									
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	0	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	2	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	0	2	2	0	0	0	0	0	0	2	0	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	0	0	0	0	3	3	3	3	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0
	>0.1 mg/L	3																									
Chloroform	If Daughter Product	2																									
Dichloromethane	If Daughter Product	2																									
		SCORE	**6**	**3**	**12**	**2**	**9**	**15**	**22**	**14**	**11**	**8**	**21**	**7**	**5**	**5**	**10**	**11**	**6**	**14**	**6**	**0**	**5**	**2**	**6**	**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

APPENDIX E

TABLE E-1 WELL CONDITION SURVEY

TABLE E-1
WELL CONDITION SURVEY
GMCH LOCKPORT/DELPHI HARRISON SITE
MAY 2015

Date	Well ID	Surface Completion Type	Conditon of Well Label	Outer Casing Condition	Surface Seal Condition (Gasket)	Lock Present?	Lock Condition	Condition of Drainage Pad (Concrete)	Well Paint Condition	PID Reading (ppm)	Depth to Product	Depth to Water	Product Thickness	Well Depth to Bottom	Well Bottom Condition	Inner Riser Condition	Inner Riser Size & Type	Riser Cap Present?	Riser Cap Type	Comments/Notes
5-May-15	MW-6-2	Stick-Up	Faded	Good	Good	Yes	Good	Good	None	0		6.80		26.89	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-6-1	Stick-Up	Faded	Good	Good	Yes	Good	Good	None	0		4.50		19.02	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-15	Stick-Up	Gone	Good	Broken	Yes	Good	Broken	None	0		6.00		17.11	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-11	Stick-Up	Gone	Broken	Good	No	Not Present	Good	None	0		6.29		25.35	Relatively hard	OK	2" PVC	Yes		
13-May-15	MW-13	Flush Mount	None	--		Yes	Cut	Good	None	0		4.68		14.08	Relatively hard	OK	2" PVC	Yes		Bolts do not thread.
5-May-15	MW-14	Stick-Up	Gone	Good	Broken	Yes	Good	Broken	None	0		5.99		21.65	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-12	Stick-Up	Gone	Broken	Good	Yes	Good	Good	None	0		6.12		16.60	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-3	Flush Mount	None	--	Good	No	--	Good	None	0		3.08		24.98	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-1	Flush Mount	None	--	Good	No	--	Good	None	0.0		4.30		22.50	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-2	Stick-Up	Faded	Good	Good	Yes	Stuck Open	Good	None	0.0		5.70		22.20	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-4	Stick-Up	None	Good	Good	Yes	Good	Good	None	0.0		12.21		21.83	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-4	Stick-Up	None	Good	Good	Yes	Good	Good	None	19.9		9.05		34.91	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-10	Stick-Up	None	Broken	Soil	No	--	None	Good	0.0		14.99		23.70	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-8-4	Flush Mount	None	--	Good	No	--	Good	None	0.0		8.72		21.40	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-8-2	Flush Mount	None	--	Good	No	--	Good	None	3.2		7.67		22.76	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-8-3	Flush Mount	None	--	Good	No	--	Good	None	0.1		8.89		22.05	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-8-1	Flush Mount	None	+	Good	No	--	Good	None	0.0		5.55		20.08	Soft	OK	2" PVC	Yes		
5-May-15	MW-8-003-B	Flush Mount	None	--	Broken	No	--	Good	None	0.0		4.75		14.34	Relatively hard	OK	2" PVC	Yes		No bolts on cover
5-May-15	MW-7-C-2	Flush Mount	None	--	Good	No	--	Good	None	2.5		5.51		24.08	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-6	Flush Mount	None	--	Cracked	No	--	Cracked	None	0.0		3.92		16.53	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-5	Flush Mount	None	--	Cracked	No	--	Cracked	None	0.0		8.50		21.98	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-P-1	Flush Mount	None	--	Good	No	--	Good	None	3.7		9.93		19.89	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-8	Flush Mount	None	--	Good	No	--	Good	None	0.5		1.49		19.41	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7-A-6	Flush Mount	None	--	Good	No	--	Good	None	740.0		2.26		19.08	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-10-2	Flush Mount	None	--	Gone	No	--	Gone	None	0.0		2.93		16.10	Relatively hard	OK	2" PVC	Yes		Bolts do not thread
5-May-15	MW-7-7	Flush Mount	None	--	Gone	No	--	Gone	None	0.0		2.78		18.80	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-10-3	Flush Mount	None	--	Good	No	--	Good	None	0.0		3.10		15.40	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-9-101-A	Flush Mount	None	--	Good	No	--	Good	None	0.0		4.64		9.06	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-9-12	Flush Mount	None	--	Good	No	--	Good	Good	0.0		5.59		15.35	Hard	OK	2" PVC	Yes		
5-May-15	TK-6	Stick-Up	Good	Good	Good	Yes	--	Good	Good	0.0		9.14		13.17	Relatively hard	OK	4" PVC	Yes		
5-May-15	BLDG10 MW-1	Flush Mount	None	--	Good	No	--	None	Good	907.0		5.77		15.55	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-7	Stick-Up	None	Good	Good	No	--	Good	None	51.1		6.98		28.95	Relatively hard	OK	2" PVC	Yes		
5-May-15	MW-6-F-8	Flush Mount	None	--	Good	No	--	Good	None	0.0		7.96		14.33	Relatively hard	OK	2" PVC	Yes		
5-Jun-15	MW-9	Stick-Up	None	Good		Yes		Cracked	Good	0.7		8.24		17.14	Hard	OK	2" PVC	Yes	J-Plug	
5-Jun-15	MW-5	Stick-Up	None	Good	Broken	No		Gone	Good	0.2		5.25		28.52	Hard	OK	2" PVC	No		
5-Jun-15	MW-6-F-7	Flush Mount	None		Good	No		Cracked	None	60.0		6.42		14.03	Hard	OK	2" PVC	Yes	J-Plug	One bollt does not thread.
5-Jun-15	MW-6-F-9	Flush Mount	None		Good	No		Cracked	None	0.9		6.40		15.29	Hard	OK	2" PVC	Yes	J-Plug	
5-Jun-15	TK-1	Stick-Up	None	Bent		Yes	Good	None	Peeled	0.0		DRY		9.48	Hard	OK	2" SS	Yes	J-Plug	
5-Jun-15	TK-2	Stick-Up	None	Broken		Yes	Good	None	Peeled	0.0		5.62		12.16	Hard	OK	2" SS	Yes	J-Plug	Hinge broken.
5-Jun-15	TK-3	Stick-Up	Good	Good		Yes	Good	None	Good	0.0		7.35		13.75	Hard	OK	4" PVC	Yes	J-Plug	
5-Jun-15	TK-4	Stick-Up	Good	Good		Yes	Good	None	Good	0.0		9.03		14.49	Hard	OK	4" PVC	Yes	J-Plug	
5-Jun-15	TK-5	Stick-Up	Good	Good		Yes	Good	Good	Good	0.0		9.09		16.51	Hard	OK	4" PVC	Yes	J-Plug	
5-Jun-15	MW-8	Stick-Up	None	Good		Yes	Good	Good	Good	0.5		5.95		18.69	Hard	OK	2" PVC	Yes	Slip Cap	
5-Jun-15	MW-3	Stick-Up	None	Good		Yes	Cut	None	Good	0		43.26		72.58	Hard	OK	2" PVC	No		Had to cut off lock.
5-Jun-15	MW-3 S/D	Stick-Up	None	Good		Yes	Good	None	Good	41.9		7.45		28.89	Hard	OK	2" PVC	Yes	J-Plug	
5-Jun-15	MW-6	Stick-Up	None	Good		Yes	Broken	None	Good	1.3		8.73		15.87	Hard	OK	2" PVC	Yes	Slip Cap	Lid Broken.

*Measurements taken from top of riser unless otherwise noted

ATTACHMENT A

TEST AMERICA ANALYTICAL LABORATORY REPORTS

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: 480-80116-1

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:
5/21/2015 7:40:52 PM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
(716)504-9874
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Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80116-1

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.

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 is outside acceptance limits.
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.

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. TestAmerica Job ID: 480-80116-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Job ID: 480-80116-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80116-1

Receipt
The samples were received on 5/11/2015 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

GC/MS VOA
Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-7-3-051115 (480-80116-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatile sample was analyzed with significant headspace in the sample vial: MW-7-1-051115 (480-80116-2). Significant headspace is defined as a bubble greater than 6 mm in diameter.

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

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-7-3-051115 (480-80116-1), MW-7-1-051115 (480-80116-2) and (480-80116-G-1 MS). The sample was analyzed at a dilution based on screening results.

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-7-3-051115 (480-80116-1). 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: 480-80116-1

Client Sample ID: MW-7-3-051115 — Lab Sample ID: 480-80116-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	50		10	9.0	ug/L	10		8260C	Total/NA
Methane	100		40	10	ug/L	10		RSK-175	Total/NA
Iron	3.4	B	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	234		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.35	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	8280		100	56.4	mg/L	200		300.0	Total/NA
Sulfate	776		400	69.8	mg/L	200		300.0	Total/NA
Ammonia	2.8		0.040	0.018	mg/L	2		350.1	Total/NA
Nitrate	0.026	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.7	F1	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	328	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.095	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	17000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-1-051115 — Lab Sample ID: 480-80116-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	6.1		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.071	B	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	106		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.34	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1630		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	124		100	17.5	mg/L	50		300.0	Total/NA
Nitrate	0.028	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.6		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	329	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	14000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80116-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	4.0		1.0	0.46	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7-3-051115 — Lab Sample ID: 480-80116-1

Date Collected: 05/11/15 12:30 — **Matrix: Water**
Date Received: 05/11/15 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		10	8.1	ug/L			05/20/15 05:43	10
Tetrachloroethene	ND		10	3.6	ug/L			05/20/15 05:43	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			05/20/15 05:43	10
Trichloroethene	ND		10	4.6	ug/L			05/20/15 05:43	10
Vinyl chloride	**50**		10	9.0	ug/L			05/20/15 05:43	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/20/15 05:43*	*10*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*05/20/15 05:43*	*10*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/20/15 05:43*	*10*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*05/20/15 05:43*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		75	15	ug/L			05/12/15 11:35	10
Ethene	ND		70	15	ug/L			05/12/15 11:35	10
Methane	**100**		40	10	ug/L			05/12/15 11:35	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**17000**		1000	1000	ug/L			05/19/15 14:42	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3.4**	**B**	0.050	0.019	mg/L		05/13/15 11:23	05/14/15 17:31	1
Magnesium	**234**		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 17:31	1
Manganese	**0.35**	**B**	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 17:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8280**		100	56.4	mg/L			05/16/15 10:40	200
Sulfate	**776**		400	69.8	mg/L			05/16/15 10:40	200
Ammonia	**2.8**		0.040	0.018	mg/L			05/13/15 17:14	2
Nitrate	**0.026**	**J**	0.050	0.020	mg/L			05/12/15 15:44	1
Nitrite	ND		0.050	0.020	mg/L			05/12/15 15:44	1
Total Organic Carbon	**1.7**	**F1**	1.0	0.43	mg/L			05/18/15 22:52	1
Total Alkalinity	**328**	**B**	5.0	0.79	mg/L			05/18/15 15:54	1
Sulfide	**0.095**	**J**	0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: MW-7-1-051115 — Lab Sample ID: 480-80116-2

Date Collected: 05/11/15 15:45 — **Matrix: Water**
Date Received: 05/11/15 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			05/20/15 12:32	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 12:32	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 12:32	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 12:32	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 12:32	1

Client Sample ID: MW-7-1-051115 — Lab Sample ID: 480-80116-2

Date Collected: 05/11/15 15:45 — **Matrix: Water**
Date Received: 05/11/15 16:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/20/15 12:32*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/20/15 12:32*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/20/15 12:32*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*05/20/15 12:32*	*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			05/12/15 11:53	1
Ethene	ND		7.0	1.5	ug/L			05/12/15 11:53	1
Methane	**6.1**		4.0	1.0	ug/L			05/12/15 11:53	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**14000**		1000	1000	ug/L			05/19/15 14:55	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.071**	**B**	0.050	0.019	mg/L		05/13/15 11:23	05/14/15 17:34	1
Magnesium	**106**		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 17:34	1
Manganese	**0.34**	**B**	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 17:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1630**		25.0	14.1	mg/L			05/16/15 12:08	50
Sulfate	**124**		100	17.5	mg/L			05/16/15 12:08	50
Ammonia	ND		0.020	0.0090	mg/L			05/13/15 16:51	1
Nitrate	**0.028**	**J**	0.050	0.020	mg/L			05/12/15 15:47	1
Nitrite	ND		0.050	0.020	mg/L			05/12/15 15:47	1
Total Organic Carbon	**1.6**		1.0	0.43	mg/L			05/18/15 23:20	1
Total Alkalinity	**329**	**B**	5.0	0.79	mg/L			05/18/15 16:02	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80116-3

Date Collected: 05/11/15 00:00 — **Matrix: Water**
Date Received: 05/11/15 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			05/20/15 01:10	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 01:10	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 01:10	1
Trichloroethene	**4.0**		1.0	0.46	ug/L			05/20/15 01:10	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/20/15 01:10*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/20/15 01:10*	*1*
Toluene-d8 (Surr)	*93*		*71 - 126*		*05/20/15 01:10*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*05/20/15 01:10*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80116-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80116-1	MW-7-3-051115	99	94	96	93
480-80116-2	MW-7-1-051115	101	97	97	93
480-80116-3	TRIP BLANK	102	95	93	96
LCS 480-243483/4	Lab Control Sample	98	96	100	98
LCS 480-243532/5	Lab Control Sample	99	99	99	97
MB 480-243483/6	Method Blank	101	94	96	95
MB 480-243532/7	Method Blank	100	96	97	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-243483/6
Matrix: Water
Analysis Batch: 243483

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			05/19/15 23:47	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/15 23:47	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/15 23:47	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/15 23:47	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/15 23:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/19/15 23:47*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*05/19/15 23:47*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/19/15 23:47*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/19/15 23:47*	*1*

Lab Sample ID: LCS 480-243483/4
Matrix: Water
Analysis Batch: 243483

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	26.9		ug/L		108	74 - 122
trans-1,2-Dichloroethene	25.0	25.2		ug/L		101	73 - 127
Trichloroethene	25.0	24.4		ug/L		98	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*100*		*71 - 126*
Dibromofluoromethane (Surr)	*98*		*60 - 140*

Lab Sample ID: MB 480-243532/7
Matrix: Water
Analysis Batch: 243532

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			05/20/15 11:46	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 11:46	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 11:46	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 11:46	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/20/15 11:46*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/20/15 11:46*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/20/15 11:46*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*05/20/15 11:46*	*1*

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

Lab Sample ID: LCS 480-243532/5
Matrix: Water
Analysis Batch: 243532

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	24.0		ug/L		96	74 - 124
Tetrachloroethene	25.0	22.6		ug/L		91	74 - 122
trans-1,2-Dichloroethene	25.0	23.4		ug/L		94	73 - 127
Trichloroethene	25.0	22.6		ug/L		90	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*99*		*71 - 126*
Dibromofluoromethane (Surr)	*97*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-241845/3
Matrix: Water
Analysis Batch: 241845

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			05/12/15 09:15	1
Ethene	ND		7.0	1.5	ug/L			05/12/15 09:15	1
Methane	ND		4.0	1.0	ug/L			05/12/15 09:15	1

Lab Sample ID: LCS 480-241845/4
Matrix: Water
Analysis Batch: 241845

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	17.1		ug/L		118	79 - 120
Ethene	13.6	15.5		ug/L		114	78 - 115
Methane	7.77	8.88		ug/L		114	71 - 118

Lab Sample ID: LCSD 480-241845/5
Matrix: Water
Analysis Batch: 241845

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	14.7		ug/L		101	79 - 120	15	50
Ethene	13.6	13.4		ug/L		99	78 - 115	14	50
Methane	7.77	7.61		ug/L		98	71 - 118	15	50

Lab Sample ID: MB 200-88489/3
Matrix: Water
Analysis Batch: 88489

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			05/19/15 13:45	1

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

Lab Sample ID: LCS 200-88489/2
Matrix: Water
Analysis Batch: 88489

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	5170		ug/L		103	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-242082/1-A
Matrix: Water
Analysis Batch: 242563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0219	J	0.050	0.019	mg/L		05/13/15 11:23	05/14/15 17:18	1
Magnesium	ND		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 17:18	1
Manganese	0.000900	J	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 17:18	1

Lab Sample ID: LCS 480-242082/2-A
Matrix: Water
Analysis Batch: 242563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.10		mg/L		101	80 - 120
Magnesium	10.0	10.25		mg/L		103	80 - 120
Manganese	0.200	0.200		mg/L		100	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242703/28
Matrix: Water
Analysis Batch: 242703

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			05/16/15 05:37	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 05:37	1

Lab Sample ID: MB 480-242703/52
Matrix: Water
Analysis Batch: 242703

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			05/16/15 11:53	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 11:53	1

Lab Sample ID: LCS 480-242703/27
Matrix: Water
Analysis Batch: 242703

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	20.25		mg/L		101	83 - 121
Sulfate	20.0	19.87		mg/L		99	80 - 129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-242703/51
Matrix: Water
Analysis Batch: 242703

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	20.36		mg/L		102	83 - 121
Sulfate	20.0	20.08		mg/L		100	80 - 129

Lab Sample ID: 480-80116-1 MS
Matrix: Water
Analysis Batch: 242703

Client Sample ID: MW-7-3-051115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8280		5000	13270		mg/L		100	83 - 121
Sulfate	776		5000	5734		mg/L		99	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-242254/123
Matrix: Water
Analysis Batch: 242254

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			05/13/15 17:09	1

Lab Sample ID: MB 480-242254/3
Matrix: Water
Analysis Batch: 242254

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			05/13/15 15:24	1

Lab Sample ID: MB 480-242254/99
Matrix: Water
Analysis Batch: 242254

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			05/13/15 16:48	1

Lab Sample ID: LCS 480-242254/100
Matrix: Water
Analysis Batch: 242254

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

Lab Sample ID: LCS 480-242254/124
Matrix: Water
Analysis Batch: 242254

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: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-242254/4
Matrix: Water
Analysis Batch: 242254

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	1.06		mg/L		106	90 - 110		

Lab Sample ID: 480-80116-1 MS
Matrix: Water
Analysis Batch: 242254

Client Sample ID: MW-7-3-051115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	2.8		0.400	3.12	4	mg/L		90	90 - 110		

Lab Sample ID: 480-80116-1 DU
Matrix: Water
Analysis Batch: 242254

Client Sample ID: MW-7-3-051115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia	2.8			2.74		mg/L				0.7	20

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

Lab Sample ID: MB 480-243607/3
Matrix: Water
Analysis Batch: 243607

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			05/18/15 20:31	1

Lab Sample ID: LCS 480-243607/4
Matrix: Water
Analysis Batch: 243607

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	58.20		mg/L		97	90 - 110		

Lab Sample ID: 480-80116-2 DU
Matrix: Water
Analysis Batch: 243607

Client Sample ID: MW-7-1-051115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	1.6			1.62		mg/L				1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243199/30
Matrix: Water
Analysis Batch: 243199

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			05/18/15 15:06	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 480-243199/7
Matrix: Water
Analysis Batch: 243199

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			05/18/15 12:53	1

Lab Sample ID: LCS 480-243199/31
Matrix: Water
Analysis Batch: 243199

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	94.72		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243199/8
Matrix: Water
Analysis Batch: 243199

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	92.30		mg/L		92	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-242891/3
Matrix: Water
Analysis Batch: 242891

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			05/16/15 12:37	1

Lab Sample ID: LCS 480-242891/4
Matrix: Water
Analysis Batch: 242891

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	0.697		mg/L		93	90 - 110

GC/MS VOA

Analysis Batch: 243483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	8260C	
480-80116-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-243483/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243483/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 243532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-2	MW-7-1-051115	Total/NA	Water	8260C	
LCS 480-243532/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243532/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	RSK-175	
480-80116-2	MW-7-1-051115	Total/NA	Water	RSK-175	
LCS 200-88489/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88489/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 241845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	RSK-175	
480-80116-2	MW-7-1-051115	Total/NA	Water	RSK-175	
LCS 480-241845/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-241845/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-241845/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 242082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	3005A	
480-80116-2	MW-7-1-051115	Total/NA	Water	3005A	
LCS 480-242082/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-242082/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 242563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	6010C	242082
480-80116-2	MW-7-1-051115	Total/NA	Water	6010C	242082
LCS 480-242082/2-A	Lab Control Sample	Total/NA	Water	6010C	242082
MB 480-242082/1-A	Method Blank	Total/NA	Water	6010C	242082

General Chemistry

Analysis Batch: 242003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	353.2	
480-80116-2	MW-7-1-051115	Total/NA	Water	353.2	

QC Association Summary

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

TestAmerica Job ID: 480-80116-1

Analysis Batch: 242004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	353.2	
480-80116-2	MW-7-1-051115	Total/NA	Water	353.2	

Analysis Batch: 242254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	350.1	
480-80116-1 DU	MW-7-3-051115	Total/NA	Water	350.1	
480-80116-1 MS	MW-7-3-051115	Total/NA	Water	350.1	
480-80116-2	MW-7-1-051115	Total/NA	Water	350.1	
LCS 480-242254/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242254/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242254/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-242254/123	Method Blank	Total/NA	Water	350.1	
MB 480-242254/3	Method Blank	Total/NA	Water	350.1	
MB 480-242254/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 242703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	300.0	
480-80116-1 MS	MW-7-3-051115	Total/NA	Water	300.0	
480-80116-2	MW-7-1-051115	Total/NA	Water	300.0	
LCS 480-242703/27	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-242703/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-242703/28	Method Blank	Total/NA	Water	300.0	
MB 480-242703/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 242891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	SM 4500 S2 D	
480-80116-2	MW-7-1-051115	Total/NA	Water	SM 4500 S2 D	
LCS 480-242891/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-242891/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 243199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	SM 2320B	
480-80116-2	MW-7-1-051115	Total/NA	Water	SM 2320B	
LCS 480-243199/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-243199/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243199/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-243199/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80116-1	MW-7-3-051115	Total/NA	Water	9060A	
480-80116-2	MW-7-1-051115	Total/NA	Water	9060A	
480-80116-2 DU	MW-7-1-051115	Total/NA	Water	9060A	
LCS 480-243607/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-243607/3	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-80116-1

Client Sample ID: MW-7-3-051115

Date Collected: 05/11/15 12:30
Date Received: 05/11/15 16:45

Lab Sample ID: 480-80116-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	243483	05/20/15 05:43	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	88489	05/19/15 14:42	NEA	TAL BUR
Total/NA	Analysis	RSK-175		10	241845	05/12/15 11:35	JMO	TAL BUF
Total/NA	Prep	3005A			242082	05/13/15 11:23	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242563	05/14/15 17:31	LMH	TAL BUF
Total/NA	Analysis	300.0		200	242703	05/16/15 10:40	CAS	TAL BUF
Total/NA	Analysis	350.1		2	242254	05/13/15 17:14	STD	TAL BUF
Total/NA	Analysis	353.2		1	242003	05/12/15 15:44	CLT	TAL BUF
Total/NA	Analysis	353.2		1	242004	05/12/15 15:44	CLT	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/18/15 22:52	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243199	05/18/15 15:54	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: MW-7-1-051115

Date Collected: 05/11/15 15:45
Date Received: 05/11/15 16:45

Lab Sample ID: 480-80116-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243532	05/20/15 12:32	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88489	05/19/15 14:55	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241845	05/12/15 11:53	JMO	TAL BUF
Total/NA	Prep	3005A			242082	05/13/15 11:23	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242563	05/14/15 17:34	LMH	TAL BUF
Total/NA	Analysis	300.0		50	242703	05/16/15 12:08	CAS	TAL BUF
Total/NA	Analysis	350.1		1	242254	05/13/15 16:51	STD	TAL BUF
Total/NA	Analysis	353.2		1	242003	05/12/15 15:47	CLT	TAL BUF
Total/NA	Analysis	353.2		1	242004	05/12/15 15:47	CLT	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/18/15 23:20	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243199	05/18/15 16:02	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/11/15 00:00
Date Received: 05/11/15 16:45

Lab Sample ID: 480-80116-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243483	05/20/15 01:10	LJF	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: 480-80116-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80116-1

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: 480-80116-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80116-1	MW-7-3-051115	Water	05/11/15 12:30	05/11/15 16:45
480-80116-2	MW-7-1-051115	Water	05/11/15 15:45	05/11/15 16:45
480-80116-3	TRIP BLANK	Water	05/11/15 00:00	05/11/15 16:45

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	Sampler: D. WOLF	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)				Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N					
MW-7-3-051115	5/11/15	1230	G	Water	X	X	X	X	X	X	X	X	X	X	X	X					
MW-7-1-051115	5/11/15	1545	G	Water	X	X	X	X	X	X	X	X	X	X	X	X					
TRIP BLANK				Water						X											
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

480-80116 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/11/15 16:45			5/11/15 1645	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.4 #1

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24025.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80116-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/21/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7-3-051115 (480-80116-1)	5/11/15	12:30 Eastern		Water			X	3	
MW-7-1-051115 (480-80116-2)	5/11/15	15:45 Eastern		Water			X	3	

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cameron Wallace	5-12-15 1700	TAB		5/13/15 1030	TA BTV
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/21/2015


ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE
AMHERST, NY 14228
UNITED STATES US
SHIP DATE: 12MAY15
ACTWGT: 51.8 LB
CAD: 846654/CAFE2807
DIMS: 28x16x15 IN
BILL RECIPIENT
TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: BURLINGTON
DEPT: SAMPLE CONTROL
RT 0
FZ 0
3885
05.13
FedEx
Express
WED - 13 MAY AA
TRK# 0201 5657 0118 3885
STANDARD OVERNIGHT
EK BTVA
05403
VT-US BTV
Part # 156146V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80116-1

Login Number: 80116
List Number: 1
Creator: Williams, Christopher S

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.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80116-1

Login Number: 80116
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/13/15 11:38 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455344
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	4.0ºC
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.	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: 480-80177-1

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:
5/27/2015 3:18:51 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80177-1

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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. TestAmerica Job ID: 480-80177-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Job ID: 480-80177-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80177-1

Receipt
The samples were received on 5/12/2015 4:30 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.

Receipt Exceptions

The Chain-of-Custody (COC) was improperly completed. On the COC, 6010 is requested for the following samples: TRIP BLANK (480-80177-4). However, as the sample is a Trip Blank, 8260 was assigned.

GC/MS VOA
Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-8-4-051215 (480-80177-3). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-7-2-051215 (480-80177-1), MW-7-4-051215 (480-80177-2), MW-8-4-051215 (480-80177-3) and (480-80177-G-3 MS). The sample was analyzed at a dilution based on screening results.

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 Verification (CCVL 480-242563/44) contained Total Iron outside the control limits. All reported samples MW-7-2-051215 (480-80177-1) and MW-8-4-051215 (480-80177-3) associated with this CCVL were either below the laboratory's standard reporting limit for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; 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: 480-80177-1

Client Sample ID: MW-7-2-051215 — Lab Sample ID: 480-80177-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.030	J B ^	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	30.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0058	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	90.0		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	25.5		20.0	3.5	mg/L	10		300.0	Total/NA
Total Organic Carbon	1.5		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	6300		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-4-051215 — Lab Sample ID: 480-80177-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.19	B	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	30.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0053	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	251		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	39.0	J	40.0	7.0	mg/L	20		300.0	Total/NA
Nitrate	0.058		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.2	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	334	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	6200		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-8-4-051215 — Lab Sample ID: 480-80177-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	42		5.0	4.1	ug/L	5		8260C	Total/NA
Trichloroethene	6.2		5.0	2.3	ug/L	5		8260C	Total/NA
Vinyl chloride	24		5.0	4.5	ug/L	5		8260C	Total/NA
Methane	80		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	2.4	B ^	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	124		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.1	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	5670		100	56.4	mg/L	200		300.0	Total/NA
Sulfate	459		400	69.8	mg/L	200		300.0	Total/NA
Ammonia	0.14		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.022	J	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	159	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	3700		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80177-4

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-7-2-051215 — Lab Sample ID: 480-80177-1

Date Collected: 05/12/15 11:05 — **Matrix: Water**
Date Received: 05/12/15 16:30

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			05/20/15 17:29	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 17:29	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 17:29	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 17:29	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/20/15 17:29*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*05/20/15 17:29*	*1*
Toluene-d8 (Surr)	*92*		*71 - 126*		*05/20/15 17:29*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/20/15 17:29*	*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			05/13/15 14:34	1
Ethene	ND		7.0	1.5	ug/L			05/13/15 14:34	1
Methane	ND		4.0	1.0	ug/L			05/13/15 14:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**6300**		1000	1000	ug/L			05/20/15 13:23	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.030**	**J B ^**	0.050	0.019	mg/L		05/13/15 11:23	05/14/15 18:37	1
Magnesium	**30.2**		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 18:37	1
Manganese	**0.0058**	**B**	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 18:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90.0**		5.0	2.8	mg/L			05/16/15 14:35	10
Sulfate	**25.5**		20.0	3.5	mg/L			05/16/15 14:35	10
Ammonia	ND	F1	0.020	0.0090	mg/L			05/14/15 13:26	1
Nitrate	ND		0.050	0.020	mg/L			05/13/15 16:52	1
Nitrite	ND		0.050	0.020	mg/L			05/13/15 16:52	1
Total Organic Carbon	**1.5**		1.0	0.43	mg/L			05/19/15 00:17	1
Total Alkalinity	**305**	**B**	5.0	0.79	mg/L			05/18/15 16:42	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: MW-7-4-051215 — Lab Sample ID: 480-80177-2

Date Collected: 05/12/15 11:30 — **Matrix: Water**
Date Received: 05/12/15 16:30

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			05/20/15 17:51	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 17:51	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 17:51	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 17:51	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 17:51	1

Client Sample ID: MW-7-4-051215 — Lab Sample ID: 480-80177-2

Date Collected: 05/12/15 11:30 — **Matrix: Water**
Date Received: 05/12/15 16:30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/20/15 17:51*	*1*
4-Bromofluorobenzene (Surr)	*91*		*73 - 120*		*05/20/15 17:51*	*1*
Toluene-d8 (Surr)	*94*		*71 - 126*		*05/20/15 17:51*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/20/15 17:51*	*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			05/13/15 14:52	1
Ethene	ND		7.0	1.5	ug/L			05/13/15 14:52	1
Methane	ND		4.0	1.0	ug/L			05/13/15 14:52	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**6200**		1000	1000	ug/L			05/20/15 13:35	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.19**	**B**	0.050	0.019	mg/L		05/13/15 11:23	05/15/15 10:00	1
Magnesium	**30.2**		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 18:40	1
Manganese	**0.0053**	**B**	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 18:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**251**		10.0	5.6	mg/L			05/16/15 14:49	20
Sulfate	**39.0**	**J**	40.0	7.0	mg/L			05/16/15 14:49	20
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 16:41	1
Nitrate	**0.058**		0.050	0.020	mg/L			05/13/15 18:38	1
Nitrite	ND		0.050	0.020	mg/L			05/13/15 18:38	1
Total Organic Carbon	**1.2**	**B**	1.0	0.43	mg/L			05/22/15 16:21	1
Total Alkalinity	**334**	**B**	5.0	0.79	mg/L			05/18/15 16:50	1
Sulfide	ND	F1	0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: MW-8-4-051215 — Lab Sample ID: 480-80177-3

Date Collected: 05/12/15 15:20 — **Matrix: Water**
Date Received: 05/12/15 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**42**		5.0	4.1	ug/L			05/20/15 18:13	5
Tetrachloroethene	ND		5.0	1.8	ug/L			05/20/15 18:13	5
trans-1,2-Dichloroethene	ND		5.0	4.5	ug/L			05/20/15 18:13	5
Trichloroethene	**6.2**		5.0	2.3	ug/L			05/20/15 18:13	5
Vinyl chloride	**24**		5.0	4.5	ug/L			05/20/15 18:13	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/20/15 18:13*	*5*
4-Bromofluorobenzene (Surr)	*91*		*73 - 120*		*05/20/15 18:13*	*5*
Toluene-d8 (Surr)	*93*		*71 - 126*		*05/20/15 18:13*	*5*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*05/20/15 18:13*	*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			05/13/15 15:09	1

Client Sample ID: MW-8-4-051215 — Lab Sample ID: 480-80177-3

Date Collected: 05/12/15 15:20 — **Matrix: Water**
Date Received: 05/12/15 16:30

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			05/13/15 15:09	1
Methane	**80**		4.0	1.0	ug/L			05/13/15 15:09	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**3700**		1000	1000	ug/L			05/20/15 13:46	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2.4**	**B ^**	0.050	0.019	mg/L		05/13/15 11:23	05/14/15 18:43	1
Magnesium	**124**		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 18:43	1
Manganese	**1.1**	**B**	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 18:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5670**		100	56.4	mg/L			05/16/15 15:04	200
Sulfate	**459**		400	69.8	mg/L			05/16/15 15:04	200
Ammonia	**0.14**		0.020	0.0090	mg/L			05/14/15 16:42	1
Nitrate	**0.022**	**J**	0.050	0.020	mg/L			05/13/15 16:55	1
Nitrite	ND		0.050	0.020	mg/L			05/13/15 16:55	1
Total Organic Carbon	**2.0**		1.0	0.43	mg/L			05/19/15 02:09	1
Total Alkalinity	**159**	**B**	5.0	0.79	mg/L			05/18/15 16:55	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80177-4

Date Collected: 05/12/15 00:00 — **Matrix: Water**
Date Received: 05/12/15 16:30

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			05/20/15 18:35	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 18:35	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 18:35	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 18:35	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/20/15 18:35*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*05/20/15 18:35*	*1*
Toluene-d8 (Surr)	*94*		*71 - 126*		*05/20/15 18:35*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*05/20/15 18:35*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80177-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80177-1	MW-7-2-051215	100	93	92	98
480-80177-2	MW-7-4-051215	106	91	94	102
480-80177-3	MW-8-4-051215	104	91	93	101
480-80177-4	TRIP BLANK	101	93	94	99
LCS 480-243534/5	Lab Control Sample	101	97	93	102
MB 480-243534/7	Method Blank	96	95	96	96

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-243534/7
Matrix: Water
Analysis Batch: 243534

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			05/20/15 11:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 11:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 11:30	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 11:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*66 - 137*		*05/20/15 11:30*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/20/15 11:30*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/20/15 11:30*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*05/20/15 11:30*	*1*

Lab Sample ID: LCS 480-243534/5
Matrix: Water
Analysis Batch: 243534

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	24.1		ug/L		96	74 - 124
Tetrachloroethene	25.0	23.9		ug/L		95	74 - 122
trans-1,2-Dichloroethene	25.0	24.3		ug/L		97	73 - 127
Trichloroethene	25.0	24.8		ug/L		99	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*
Toluene-d8 (Surr)	*93*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-242106/3
Matrix: Water
Analysis Batch: 242106

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			05/13/15 10:12	1
Ethene	ND		7.0	1.5	ug/L			05/13/15 10:12	1
Methane	ND		4.0	1.0	ug/L			05/13/15 10:12	1

Lab Sample ID: LCS 480-242106/4
Matrix: Water
Analysis Batch: 242106

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	79 - 120
Ethene	13.6	14.1		ug/L		103	78 - 115
Methane	7.77	8.12		ug/L		105	71 - 118

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

Lab Sample ID: MB 200-88566/3
Matrix: Water
Analysis Batch: 88566

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			05/20/15 13:13	1

Lab Sample ID: LCS 200-88566/2
Matrix: Water
Analysis Batch: 88566

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	5270		ug/L		105	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-242082/1-A
Matrix: Water
Analysis Batch: 242563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0219	J	0.050	0.019	mg/L		05/13/15 11:23	05/14/15 17:18	1
Magnesium	ND		0.20	0.043	mg/L		05/13/15 11:23	05/14/15 17:18	1
Manganese	0.000900	J	0.0030	0.00040	mg/L		05/13/15 11:23	05/14/15 17:18	1

Lab Sample ID: LCS 480-242082/2-A
Matrix: Water
Analysis Batch: 242563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.10		mg/L		101	80 - 120
Magnesium	10.0	10.25		mg/L		103	80 - 120
Manganese	0.200	0.200		mg/L		100	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242703/52
Matrix: Water
Analysis Batch: 242703

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			05/16/15 11:53	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 11:53	1

Lab Sample ID: LCS 480-242703/51
Matrix: Water
Analysis Batch: 242703

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	20.36		mg/L		102	83 - 121
Sulfate	20.0	20.08		mg/L		100	80 - 129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 480-80177-3 MS — **Client Sample ID: MW-8-4-051215**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242703

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5670		5000	10870		mg/L		104	83 - 121
Sulfate	459		5000	5473		mg/L		100	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-242480/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 13:29	1

Lab Sample ID: MB 480-242480/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 13:09	1

Lab Sample ID: LCS 480-242480/28 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242480

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

Lab Sample ID: LCS 480-242480/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242480

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

Lab Sample ID: 480-80177-1 MS — **Client Sample ID: MW-7-2-051215**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND	F1	0.200	0.115	F1	mg/L		58	90 - 110

Lab Sample ID: MB 480-242507/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242507

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

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-242507/51
Matrix: Water
Analysis Batch: 242507

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			05/14/15 16:40	1

Lab Sample ID: LCS 480-242507/28
Matrix: Water
Analysis Batch: 242507

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	1.06		mg/L		106	90 - 110

Lab Sample ID: LCS 480-242507/52
Matrix: Water
Analysis Batch: 242507

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	1.06		mg/L		106	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-242267/3
Matrix: Water
Analysis Batch: 242267

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			05/13/15 18:36	1

Lab Sample ID: LCS 480-242267/4
Matrix: Water
Analysis Batch: 242267

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: 480-80177-2 MS
Matrix: Water
Analysis Batch: 242267

Client Sample ID: MW-7-4-051215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	1.00		mg/L		100	90 - 110

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

Lab Sample ID: MB 480-243607/3
Matrix: Water
Analysis Batch: 243607

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			05/18/15 20:31	1

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

Lab Sample ID: LCS 480-243607/4
Matrix: Water
Analysis Batch: 243607

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	58.20		mg/L		97	90 - 110

Lab Sample ID: MB 480-244300/4
Matrix: Water
Analysis Batch: 244300

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	0.553	J	1.0	0.43	mg/L			05/22/15 15:28	1

Lab Sample ID: LCS 480-244300/5
Matrix: Water
Analysis Batch: 244300

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	59.64		mg/L		99	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243199/30
Matrix: Water
Analysis Batch: 243199

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			05/18/15 15:06	1

Lab Sample ID: MB 480-243199/7
Matrix: Water
Analysis Batch: 243199

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			05/18/15 12:53	1

Lab Sample ID: LCS 480-243199/31
Matrix: Water
Analysis Batch: 243199

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	94.72		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243199/8
Matrix: Water
Analysis Batch: 243199

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	92.30		mg/L		92	90 - 110

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

TestAmerica Job ID: 480-80177-1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-242891/3
Matrix: Water
Analysis Batch: 242891

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			05/16/15 12:37	1

Lab Sample ID: LCS 480-242891/4
Matrix: Water
Analysis Batch: 242891

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	0.697		mg/L		93	90 - 110

Lab Sample ID: 480-80177-2 MS
Matrix: Water
Analysis Batch: 242891

Client Sample ID: MW-7-4-051215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND	F1	0.500	0.369	F1	mg/L		74	90 - 110

Lab Sample ID: 480-80177-2 MSD
Matrix: Water
Analysis Batch: 242891

Client Sample ID: MW-7-4-051215
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	F1	0.500	0.369	F1	mg/L		74	90 - 110	0	20

QC Association Summary

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

TestAmerica Job ID: 480-80177-1

GC/MS VOA

Analysis Batch: 243534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	8260C	
480-80177-2	MW-7-4-051215	Total/NA	Water	8260C	
480-80177-3	MW-8-4-051215	Total/NA	Water	8260C	
480-80177-4	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-243534/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243534/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	RSK-175	
480-80177-2	MW-7-4-051215	Total/NA	Water	RSK-175	
480-80177-3	MW-8-4-051215	Total/NA	Water	RSK-175	
LCS 200-88566/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88566/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 242106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	RSK-175	
480-80177-2	MW-7-4-051215	Total/NA	Water	RSK-175	
480-80177-3	MW-8-4-051215	Total/NA	Water	RSK-175	
LCS 480-242106/4	Lab Control Sample	Total/NA	Water	RSK-175	
MB 480-242106/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 242082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	3005A	
480-80177-2	MW-7-4-051215	Total/NA	Water	3005A	
480-80177-3	MW-8-4-051215	Total/NA	Water	3005A	
LCS 480-242082/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-242082/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 242563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	6010C	242082
480-80177-2	MW-7-4-051215	Total/NA	Water	6010C	242082
480-80177-3	MW-8-4-051215	Total/NA	Water	6010C	242082
LCS 480-242082/2-A	Lab Control Sample	Total/NA	Water	6010C	242082
MB 480-242082/1-A	Method Blank	Total/NA	Water	6010C	242082

Analysis Batch: 242728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-2	MW-7-4-051215	Total/NA	Water	6010C	242082

General Chemistry

Analysis Batch: 242267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-2	MW-7-4-051215	Total/NA	Water	353.2	
480-80177-2 MS	MW-7-4-051215	Total/NA	Water	353.2	
LCS 480-242267/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-242267/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 242271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	353.2	
480-80177-2	MW-7-4-051215	Total/NA	Water	353.2	
480-80177-3	MW-8-4-051215	Total/NA	Water	353.2	

Analysis Batch: 242276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	353.2	
480-80177-3	MW-8-4-051215	Total/NA	Water	353.2	

Analysis Batch: 242480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	350.1	
480-80177-1 MS	MW-7-2-051215	Total/NA	Water	350.1	
LCS 480-242480/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242480/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-242480/27	Method Blank	Total/NA	Water	350.1	
MB 480-242480/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 242507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-2	MW-7-4-051215	Total/NA	Water	350.1	
480-80177-3	MW-8-4-051215	Total/NA	Water	350.1	
LCS 480-242507/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242507/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-242507/27	Method Blank	Total/NA	Water	350.1	
MB 480-242507/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 242703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	300.0	
480-80177-2	MW-7-4-051215	Total/NA	Water	300.0	
480-80177-3	MW-8-4-051215	Total/NA	Water	300.0	
480-80177-3 MS	MW-8-4-051215	Total/NA	Water	300.0	
LCS 480-242703/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-242703/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 242891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	SM 4500 S2 D	
480-80177-2	MW-7-4-051215	Total/NA	Water	SM 4500 S2 D	
480-80177-2 MS	MW-7-4-051215	Total/NA	Water	SM 4500 S2 D	
480-80177-2 MSD	MW-7-4-051215	Total/NA	Water	SM 4500 S2 D	
480-80177-3	MW-8-4-051215	Total/NA	Water	SM 4500 S2 D	
LCS 480-242891/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	

General Chemistry (Continued)

Analysis Batch: 242891 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-242891/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 243199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	SM 2320B	
480-80177-2	MW-7-4-051215	Total/NA	Water	SM 2320B	
480-80177-3	MW-8-4-051215	Total/NA	Water	SM 2320B	
LCS 480-243199/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-243199/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243199/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-243199/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-1	MW-7-2-051215	Total/NA	Water	9060A	
480-80177-3	MW-8-4-051215	Total/NA	Water	9060A	
LCS 480-243607/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-243607/3	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 244300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80177-2	MW-7-4-051215	Total/NA	Water	9060A	
LCS 480-244300/5	Lab Control Sample	Total/NA	Water	9060A	
MB 480-244300/4	Method Blank	Total/NA	Water	9060A	

Client Sample ID: MW-7-2-051215

Lab Sample ID: 480-80177-1

Date Collected: 05/12/15 11:05

Matrix: Water

Date Received: 05/12/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243534	05/20/15 17:29	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88566	05/20/15 13:23	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242106	05/13/15 14:34	JMO	TAL BUF
Total/NA	Prep	3005A			242082	05/13/15 11:23	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242563	05/14/15 18:37	LMH	TAL BUF
Total/NA	Analysis	300.0		10	242703	05/16/15 14:35	CAS	TAL BUF
Total/NA	Analysis	350.1		1	242480	05/14/15 13:26	STD	TAL BUF
Total/NA	Analysis	353.2		1	242271	05/13/15 16:52	CLT	TAL BUF
Total/NA	Analysis	353.2		1	242276	05/13/15 16:52	CLT	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/19/15 00:17	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243199	05/18/15 16:42	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: MW-7-4-051215

Lab Sample ID: 480-80177-2

Date Collected: 05/12/15 11:30

Matrix: Water

Date Received: 05/12/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243534	05/20/15 17:51	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88566	05/20/15 13:35	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242106	05/13/15 14:52	JMO	TAL BUF
Total/NA	Prep	3005A			242082	05/13/15 11:23	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242563	05/14/15 18:40	LMH	TAL BUF
Total/NA	Prep	3005A			242082	05/13/15 11:23	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242728	05/15/15 10:00	LMH	TAL BUF
Total/NA	Analysis	300.0		20	242703	05/16/15 14:49	CAS	TAL BUF
Total/NA	Analysis	350.1		1	242507	05/14/15 16:41	STD	TAL BUF
Total/NA	Analysis	353.2		1	242271	05/13/15 18:38	CLT	TAL BUF
Total/NA	Analysis	353.2		1	242267	05/13/15 18:38	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244300	05/22/15 16:21	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243199	05/18/15 16:50	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: MW-8-4-051215

Lab Sample ID: 480-80177-3

Date Collected: 05/12/15 15:20

Matrix: Water

Date Received: 05/12/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	243534	05/20/15 18:13	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88566	05/20/15 13:46	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242106	05/13/15 15:09	JMO	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-80177-1

Client Sample ID: MW-8-4-051215

Lab Sample ID: 480-80177-3

Date Collected: 05/12/15 15:20
Matrix: Water
Date Received: 05/12/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			242082	05/13/15 11:23	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242563	05/14/15 18:43	LMH	TAL BUF
Total/NA	Analysis	300.0		200	242703	05/16/15 15:04	CAS	TAL BUF
Total/NA	Analysis	350.1		1	242507	05/14/15 16:42	STD	TAL BUF
Total/NA	Analysis	353.2		1	242271	05/13/15 16:55	CLT	TAL BUF
Total/NA	Analysis	353.2		1	242276	05/13/15 16:55	CLT	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/19/15 02:09	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243199	05/18/15 16:55	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-80177-4

Date Collected: 05/12/15 00:00
Matrix: Water
Date Received: 05/12/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243534	05/20/15 18:35	NMD1	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: 480-80177-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80177-1

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: 480-80177-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80177-1	MW-7-2-051215	Water	05/12/15 11:05	05/12/15 16:30
480-80177-2	MW-7-4-051215	Water	05/12/15 11:30	05/12/15 16:30
480-80177-3	MW-8-4-051215	Water	05/12/15 15:20	05/12/15 16:30
480-80177-4	TRIP BLANK	Water	05/12/15 00:00	05/12/15 16:30

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

Chain of Custody Record

testamerica

Client Information	Sampler: D. WUCK	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-894-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	S	D	A	A	A	CB	N	N	N		
MW-7-2-051215	5/12/15	1105	G	Water	N	N	Y	Y	X	X	X	X	X	X	X	X		
MW-7-4-051215	5/12/15	1130	G	Water	N	N	Y	Y	X	X	X	X	X	X	X	X		
MW-8-4-051215	5/12/15	1520	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/12/15			Water	N	N			X									
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80177 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5/12/15 16:30		[signature]	5/12/15 1630	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.8 #1

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80177-1

Login Number: 80177
List Number: 1
Creator: Hulbert, Michael J

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	
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: 480-80177-1

Login Number: 80177
List Number: 2
Creator: Goodrich, Kenneth L

List Source: TestAmerica Burlington
List Creation: 05/14/15 03:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455353
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	1.0ºC
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.	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: 480-80279-1
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:
5/26/2015 3:47:55 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80279-1

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. TestAmerica Job ID: 480-80279-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Job ID: 480-80279-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80279-1

Receipt
The samples were received on 5/13/2015 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

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

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-6-1-051315 (480-80279-1) and (480-80279-G-1 MS). The samples were analyzed at a dilution based on screening results.

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: 480-80279-1

Client Sample ID: MW-6-1-051315 — Lab Sample ID: 480-80279-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	8.3		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	12.3		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	48.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.8		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	869		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	18.2	J	100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.48		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	3.7		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	399		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	22000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80279-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-6-1-051315

Lab Sample ID: 480-80279-1

Date Collected: 05/13/15 15:00
Date Received: 05/13/15 16:30

Matrix: Water

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			05/21/15 17:35	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/15 17:35	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/15 17:35	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/15 17:35	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/15 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/21/15 17:35*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*05/21/15 17:35*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/21/15 17:35*	*1*
Dibromofluoromethane (Surr)	*106*		*60 - 140*		*05/21/15 17:35*	*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			05/14/15 16:11	1
Ethene	ND		7.0	1.5	ug/L			05/14/15 16:11	1
Methane	**8.3**		4.0	1.0	ug/L			05/14/15 16:11	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**22000**		1000	1000	ug/L			05/21/15 14:49	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**12.3**		0.050	0.019	mg/L		05/15/15 08:30	05/15/15 16:49	1
Magnesium	**48.3**		0.20	0.043	mg/L		05/15/15 08:30	05/15/15 16:49	1
Manganese	**1.8**		0.0030	0.00040	mg/L		05/15/15 08:30	05/15/15 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**869**		25.0	14.1	mg/L			05/16/15 21:30	50
Sulfate	**18.2**	**J**	100	17.5	mg/L			05/16/15 21:30	50
Ammonia	**0.48**		0.020	0.0090	mg/L			05/17/15 08:52	1
Nitrate	ND		0.050	0.020	mg/L			05/15/15 06:42	1
Nitrite	ND		0.050	0.020	mg/L			05/15/15 06:42	1
Total Organic Carbon	**3.7**		1.0	0.43	mg/L			05/19/15 17:07	1
Total Alkalinity	**399**		5.0	0.79	mg/L			05/18/15 19:37	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-80279-2

Date Collected: 05/13/15 00:00
Date Received: 05/13/15 16:30

Matrix: Water

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			05/21/15 18:03	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/15 18:03	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/15 18:03	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/15 18:03	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/15 18:03	1

Client Sample ID: TRIP BLANK
Date Collected: 05/13/15 00:00
Date Received: 05/13/15 16:30

Lab Sample ID: 480-80279-2
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		05/21/15 18:03	1
4-Bromofluorobenzene (Surr)	104		73 - 120		05/21/15 18:03	1
Toluene-d8 (Surr)	103		71 - 126		05/21/15 18:03	1
Dibromofluoromethane (Surr)	104		60 - 140		05/21/15 18:03	1

Surrogate Summary

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

TestAmerica Job ID: 480-80279-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80279-1	MW-6-1-051315	105	103	102	106
480-80279-2	TRIP BLANK	104	104	103	104
LCS 480-243838/5	Lab Control Sample	99	104	101	100
MB 480-243838/7	Method Blank	104	102	103	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

TestAmerica Job ID: 480-80279-1

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

Lab Sample ID: MB 480-243838/7
Matrix: Water
Analysis Batch: 243838

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			05/21/15 12:59	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/15 12:59	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/15 12:59	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/15 12:59	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/15 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/21/15 12:59*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/21/15 12:59*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/21/15 12:59*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*05/21/15 12:59*	*1*

Lab Sample ID: LCS 480-243838/5
Matrix: Water
Analysis Batch: 243838

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	27.2		ug/L		109	74 - 122
trans-1,2-Dichloroethene	25.0	26.0		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)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-242451/3
Matrix: Water
Analysis Batch: 242451

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			05/14/15 11:24	1
Ethene	ND		7.0	1.5	ug/L			05/14/15 11:24	1
Methane	ND		4.0	1.0	ug/L			05/14/15 11:24	1

Lab Sample ID: LCS 480-242451/4
Matrix: Water
Analysis Batch: 242451

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	15.5		ug/L		106	79 - 120
Ethene	13.6	14.1		ug/L		104	78 - 115
Methane	7.77	7.83		ug/L		101	71 - 118

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

Lab Sample ID: LCSD 480-242451/5
Matrix: Water
Analysis Batch: 242451

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	15.9		ug/L		109	79 - 120	3	50
Ethene	13.6	14.4		ug/L		106	78 - 115	2	50
Methane	7.77	8.06		ug/L		104	71 - 118	3	50

Lab Sample ID: MB 200-88605/3
Matrix: Water
Analysis Batch: 88605

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			05/21/15 11:05	1

Lab Sample ID: LCS 200-88605/2
Matrix: Water
Analysis Batch: 88605

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	4650		ug/L		93	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-242488/1-A
Matrix: Water
Analysis Batch: 242999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242488

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/15/15 08:30	05/15/15 15:38	1
Magnesium	ND		0.20	0.043	mg/L		05/15/15 08:30	05/15/15 15:38	1
Manganese	ND		0.0030	0.00040	mg/L		05/15/15 08:30	05/15/15 15:38	1

Lab Sample ID: LCS 480-242488/2-A
Matrix: Water
Analysis Batch: 242999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.47		mg/L		95	80 - 120
Magnesium	10.0	9.84		mg/L		98	80 - 120
Manganese	0.200	0.196		mg/L		98	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242859/36
Matrix: Water
Analysis Batch: 242859

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			05/16/15 14:03	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 14:03	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-242859/84
Matrix: Water
Analysis Batch: 242859

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			05/16/15 20:33	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 20:33	1

Lab Sample ID: LCS 480-242859/35
Matrix: Water
Analysis Batch: 242859

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	20.54		mg/L		103	83 - 121
Sulfate	20.0	19.76		mg/L		99	80 - 129

Lab Sample ID: LCS 480-242859/83
Matrix: Water
Analysis Batch: 242859

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	20.60		mg/L		103	83 - 121
Sulfate	20.0	19.93		mg/L		100	80 - 129

Lab Sample ID: 480-80279-1 MS
Matrix: Water
Analysis Batch: 242859

Client Sample ID: MW-6-1-051315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	869		1250	2100		mg/L		98	83 - 121
Sulfate	18.2	J	1250	1227		mg/L		97	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-242924/3
Matrix: Water
Analysis Batch: 242924

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			05/17/15 08:45	1

Lab Sample ID: LCS 480-242924/4
Matrix: Water
Analysis Batch: 242924

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	1.05		mg/L		105	90 - 110

Lab Sample ID: 480-80279-1 MS
Matrix: Water
Analysis Batch: 242924

Client Sample ID: MW-6-1-051315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.48		0.200	0.661		mg/L		90	90 - 110

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

Lab Sample ID: MB 480-243607/27
Matrix: Water
Analysis Batch: 243607

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			05/19/15 07:45	1

Lab Sample ID: LCS 480-243607/28
Matrix: Water
Analysis Batch: 243607

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	58.47		mg/L		97	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243288/30
Matrix: Water
Analysis Batch: 243288

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.54	J	5.0	0.79	mg/L			05/18/15 21:38	1

Lab Sample ID: MB 480-243288/7
Matrix: Water
Analysis Batch: 243288

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			05/18/15 19:12	1

Lab Sample ID: LCS 480-243288/31
Matrix: Water
Analysis Batch: 243288

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	94.55		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243288/8
Matrix: Water
Analysis Batch: 243288

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	93.71		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-242891/3
Matrix: Water
Analysis Batch: 242891

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			05/16/15 12:37	1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCS 480-242891/4
Matrix: Water
Analysis Batch: 242891

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	0.697		mg/L		93	90 - 110

QC Association Summary

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

TestAmerica Job ID: 480-80279-1

GC/MS VOA

Analysis Batch: 243838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	8260C	
480-80279-2	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-243838/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243838/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	RSK-175	
LCS 200-88605/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88605/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 242451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	RSK-175	
LCS 480-242451/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-242451/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-242451/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 242488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	3005A	
LCS 480-242488/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-242488/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 242999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	6010C	242488
LCS 480-242488/2-A	Lab Control Sample	Total/NA	Water	6010C	242488
MB 480-242488/1-A	Method Blank	Total/NA	Water	6010C	242488

General Chemistry

Analysis Batch: 242656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	353.2	

Analysis Batch: 242659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	353.2	

Analysis Batch: 242859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	300.0	
480-80279-1 MS	MW-6-1-051315	Total/NA	Water	300.0	
LCS 480-242859/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-242859/83	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 242859 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-242859/36	Method Blank	Total/NA	Water	300.0	
MB 480-242859/84	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 242891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	SM 4500 S2 D	
LCS 480-242891/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-242891/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 242924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	350.1	
480-80279-1 MS	MW-6-1-051315	Total/NA	Water	350.1	
LCS 480-242924/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-242924/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 243288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	SM 2320B	
LCS 480-243288/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-243288/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243288/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-243288/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80279-1	MW-6-1-051315	Total/NA	Water	9060A	
LCS 480-243607/28	Lab Control Sample	Total/NA	Water	9060A	
MB 480-243607/27	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-80279-1

Client Sample ID: MW-6-1-051315

Date Collected: 05/13/15 15:00
Date Received: 05/13/15 16:30

Lab Sample ID: 480-80279-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243838	05/21/15 17:35	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88605	05/21/15 14:49	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242451	05/14/15 16:11	JMO	TAL BUF
Total/NA	Prep	3005A			242488	05/15/15 08:30	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242999	05/15/15 16:49	AMH	TAL BUF
Total/NA	Analysis	300.0		50	242859	05/16/15 21:30	DMR	TAL BUF
Total/NA	Analysis	350.1		1	242924	05/17/15 08:52	STD	TAL BUF
Total/NA	Analysis	353.2		1	242656	05/15/15 06:42	ELR	TAL BUF
Total/NA	Analysis	353.2		1	242659	05/15/15 06:42	ELR	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/19/15 17:07	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/18/15 19:37	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/13/15 00:00
Date Received: 05/13/15 16:30

Lab Sample ID: 480-80279-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243838	05/21/15 18:03	NMD1	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: 480-80279-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80279-1

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: 480-80279-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80279-1	MW-6-1-051315	Water	05/13/15 15:00	05/13/15 16:30
480-80279-2	TRIP BLANK	Water	05/13/15 00:00	05/13/15 16:30

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: DAN WOLF	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N		
MW-6-1-051315	5/13/15	1500	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/13/15			Water	N	N												
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80279 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5/13/15 16:30		[signature]	5/13/15 1630	TA Buff
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.5

5/26/2015

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24077.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80279-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/26/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-6-1-051315 (480-80279-1)	5/13/15	15:00 Eastern		Water			X	3	

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*		
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Cameron Wellute	Date/Time: 5-14-15 1700	Company TAB	Received by:	Date/Time: 5/15/15 0950	Company TABV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

5/26/2015

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 14MAY15
ACTWGT: 50.3 LB
CAD: 8466547CAFE2807
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

1 of 2
TRK# 0201 5657 0118 4068
MASTER

FRI - 15 MAY AA
STANDARD OVERNIGHT

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 14MAY15
ACTWGT: 50.3 LB
CAD: 8466547CAFE2807
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

2 of 2
MPS# 0263 5657 0118 4079
Mstr# 5657 0118 4068

FRI - 15 MAY AA
STANDARD OVERNIGHT

0201

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80279-1

Login Number: 80279
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: 480-80279-1

Login Number: 80279
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/15/15 11:47 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455358,357
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	3.2ºC,2.6ºC
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.	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: 480-80408-1
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:
5/28/2015 12:10:20 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80408-1

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.
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.

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: 480-80408-1

Job ID: 480-80408-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80408-1

Receipt
The samples were received on 5/14/2015 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-8-003B-051415 (480-80408-4). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-6-F-8-051415 (480-80408-1), MW-6-2-051415 (480-80408-2), MW-8-003B-051415 (480-80408-4) and (480-80408-G-4 MS). The sample was analyzed at a dilution based on screening results.

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: 480-80408-1

Client Sample ID: MW-6-F-8-051415 — Lab Sample ID: 480-80408-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	6.8		4.0	1.0	ug/L	1		RSK-175	Total/NA
Magnesium	195		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.24		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	2930		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	280		200	34.9	mg/L	100		300.0	Total/NA
Ammonia	0.015	J	0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.17		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	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	15000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-6-2-051415 — Lab Sample ID: 480-80408-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.036	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	56.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.21		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1800		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	91.1	J	100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.13		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.090		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	399	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	14000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80408-3

No Detections.

Client Sample ID: MW-8-003B-051415 — Lab Sample ID: 480-80408-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	12		2.0	1.6	ug/L	2		8260C	Total/NA
Tetrachloroethene	83		2.0	0.72	ug/L	2		8260C	Total/NA
Trichloroethene	10		2.0	0.92	ug/L	2		8260C	Total/NA
Iron	0.65		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	4.5		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.056		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	775		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	71.1	J	100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.045		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.23		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.9		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	163	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-6-F-8-051415 — Lab Sample ID: 480-80408-1

Date Collected: 05/14/15 09:45 — **Matrix: Water**
Date Received: 05/14/15 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			05/22/15 11:53	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/22/15 11:53	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/22/15 11:53	1
Trichloroethene	ND		1.0	0.46	ug/L			05/22/15 11:53	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/22/15 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/22/15 11:53*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/22/15 11:53*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/22/15 11:53*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*05/22/15 11:53*	*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			05/15/15 10:59	1
Ethene	ND		7.0	1.5	ug/L			05/15/15 10:59	1
Methane	**6.8**		4.0	1.0	ug/L			05/15/15 10:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**15000**		1000	1000	ug/L			05/26/15 11:29	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/15/15 12:30	05/16/15 15:41	1
Magnesium	**195**		0.20	0.043	mg/L		05/15/15 12:30	05/16/15 15:41	1
Manganese	**0.24**		0.0030	0.00040	mg/L		05/15/15 12:30	05/16/15 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2930**		50.0	28.2	mg/L			05/18/15 23:46	100
Sulfate	**280**		200	34.9	mg/L			05/18/15 23:46	100
Ammonia	**0.015**	**J**	0.020	0.0090	mg/L			05/18/15 13:43	1
Nitrate	**0.17**		0.050	0.020	mg/L			05/15/15 21:22	1
Nitrite	ND		0.050	0.020	mg/L			05/15/15 21:22	1
Total Organic Carbon	**1.4**		1.0	0.43	mg/L			05/20/15 08:08	1
Total Alkalinity	**364**	**B**	5.0	0.79	mg/L			05/18/15 23:07	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: MW-6-2-051415 — Lab Sample ID: 480-80408-2

Date Collected: 05/14/15 14:05 — **Matrix: Water**
Date Received: 05/14/15 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			05/22/15 12:16	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/22/15 12:16	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/22/15 12:16	1
Trichloroethene	ND		1.0	0.46	ug/L			05/22/15 12:16	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/22/15 12:16	1

Client Sample ID: MW-6-2-051415 — Lab Sample ID: 480-80408-2

Date Collected: 05/14/15 14:05 — **Matrix: Water**
Date Received: 05/14/15 16:50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/22/15 12:16*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/22/15 12:16*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/22/15 12:16*	*1*
Dibromofluoromethane (Surr)	*92*		*60 - 140*		*05/22/15 12:16*	*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			05/15/15 11:16	1
Ethene	ND		7.0	1.5	ug/L			05/15/15 11:16	1
Methane	ND		4.0	1.0	ug/L			05/15/15 11:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**14000**		1000	1000	ug/L			05/26/15 11:37	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.036**	**J**	0.050	0.019	mg/L		05/15/15 12:30	05/16/15 16:04	1
Magnesium	**56.3**		0.20	0.043	mg/L		05/15/15 12:30	05/16/15 16:04	1
Manganese	**0.21**		0.0030	0.00040	mg/L		05/15/15 12:30	05/16/15 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1800**		25.0	14.1	mg/L			05/18/15 23:54	50
Sulfate	**91.1**	**J**	100	17.5	mg/L			05/18/15 23:54	50
Ammonia	**0.13**		0.020	0.0090	mg/L			05/18/15 13:44	1
Nitrate	**0.090**		0.050	0.020	mg/L			05/15/15 21:23	1
Nitrite	ND		0.050	0.020	mg/L			05/15/15 21:23	1
Total Organic Carbon	**2.3**		1.0	0.43	mg/L			05/20/15 08:36	1
Total Alkalinity	**399**	**B**	5.0	0.79	mg/L			05/18/15 23:14	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80408-3

Date Collected: 05/14/15 00:00 — **Matrix: Water**
Date Received: 05/14/15 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			05/22/15 12:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/22/15 12:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/22/15 12:39	1
Trichloroethene	ND		1.0	0.46	ug/L			05/22/15 12:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/22/15 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*05/22/15 12:39*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/22/15 12:39*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*05/22/15 12:39*	*1*
Dibromofluoromethane (Surr)	*91*		*60 - 140*		*05/22/15 12:39*	*1*

Client Sample ID: MW-8-003B-051415 Lab Sample ID: 480-80408-4

Date Collected: 05/14/15 16:25 **Matrix: Water**
Date Received: 05/14/15 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	**12**		2.0	1.6	ug/L			05/22/15 23:17	2
Tetrachloroethene	**83**		2.0	0.72	ug/L			05/22/15 23:17	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			05/22/15 23:17	2
Trichloroethene	**10**		2.0	0.92	ug/L			05/22/15 23:17	2
Vinyl chloride	ND		2.0	1.8	ug/L			05/22/15 23:17	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/22/15 23:17*	*2*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/22/15 23:17*	*2*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/22/15 23:17*	*2*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*05/22/15 23:17*	*2*

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			05/15/15 11:34	1
Ethene	ND		7.0	1.5	ug/L			05/15/15 11:34	1
Methane	ND		4.0	1.0	ug/L			05/15/15 11:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/26/15 11:48	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.65**		0.050	0.019	mg/L		05/15/15 12:30	05/16/15 16:07	1
Magnesium	**4.5**		0.20	0.043	mg/L		05/15/15 12:30	05/16/15 16:07	1
Manganese	**0.056**		0.0030	0.00040	mg/L		05/15/15 12:30	05/16/15 16:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**775**		25.0	14.1	mg/L			05/19/15 00:02	50
Sulfate	**71.1**	**J**	100	17.5	mg/L			05/19/15 00:02	50
Ammonia	**0.045**		0.020	0.0090	mg/L			05/18/15 13:45	1
Nitrate	**0.23**		0.050	0.020	mg/L			05/15/15 21:25	1
Nitrite	ND		0.050	0.020	mg/L			05/15/15 21:25	1
Total Organic Carbon	**2.9**		1.0	0.43	mg/L			05/20/15 09:04	1
Total Alkalinity	**163**	**B**	5.0	0.79	mg/L			05/18/15 23:21	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Surrogate Summary

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

TestAmerica Job ID: 480-80408-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80408-1	MW-6-F-8-051415	101	96	97	94
480-80408-2	MW-6-2-051415	101	98	98	92
480-80408-3	TRIP BLANK	98	96	95	91
480-80408-4	MW-8-003B-051415	103	99	97	94
LCS 480-244054/5	Lab Control Sample	98	101	102	98
LCS 480-244230/4	Lab Control Sample	97	101	101	97
MB 480-244054/7	Method Blank	98	98	98	91
MB 480-244230/6	Method Blank	102	97	95	95

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-244054/7
Matrix: Water
Analysis Batch: 244054

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			05/22/15 11:19	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/22/15 11:19	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/22/15 11:19	1
Trichloroethene	ND		1.0	0.46	ug/L			05/22/15 11:19	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/22/15 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*05/22/15 11:19*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/22/15 11:19*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/22/15 11:19*	*1*
Dibromofluoromethane (Surr)	*91*		*60 - 140*		*05/22/15 11:19*	*1*

Lab Sample ID: LCS 480-244054/5
Matrix: Water
Analysis Batch: 244054

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	25.6		ug/L		102	74 - 124
Tetrachloroethene	25.0	27.6		ug/L		110	74 - 122
trans-1,2-Dichloroethene	25.0	26.4		ug/L		106	73 - 127
Trichloroethene	25.0	25.7		ug/L		103	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*98*		*60 - 140*

Lab Sample ID: MB 480-244230/6
Matrix: Water
Analysis Batch: 244230

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			05/22/15 22:29	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/22/15 22:29	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/22/15 22:29	1
Trichloroethene	ND		1.0	0.46	ug/L			05/22/15 22:29	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/22/15 22:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/22/15 22:29*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/22/15 22:29*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*05/22/15 22:29*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/22/15 22:29*	*1*

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

Lab Sample ID: LCS 480-244230/4
Matrix: Water
Analysis Batch: 244230

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	24.8		ug/L		99	74 - 124
Tetrachloroethene	25.0	26.3		ug/L		105	74 - 122
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	73 - 127
Trichloroethene	25.0	24.3		ug/L		97	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*97*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-242629/3
Matrix: Water
Analysis Batch: 242629

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			05/15/15 09:36	1
Ethene	ND		7.0	1.5	ug/L			05/15/15 09:36	1
Methane	ND		4.0	1.0	ug/L			05/15/15 09:36	1

Lab Sample ID: LCS 480-242629/4
Matrix: Water
Analysis Batch: 242629

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	15.5		ug/L		107	79 - 120
Ethene	13.6	14.3		ug/L		105	78 - 115
Methane	7.77	8.25		ug/L		106	71 - 118

Lab Sample ID: LCSD 480-242629/5
Matrix: Water
Analysis Batch: 242629

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	15.6		ug/L		107	79 - 120	1	50
Ethene	13.6	14.1		ug/L		104	78 - 115	1	50
Methane	7.77	8.19		ug/L		105	71 - 118	1	50

Lab Sample ID: MB 200-88704/3
Matrix: Water
Analysis Batch: 88704

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			05/26/15 09:31	1

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

Lab Sample ID: LCS 200-88704/2
Matrix: Water
Analysis Batch: 88704

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	4590		ug/L		92	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-242652/1-A
Matrix: Water
Analysis Batch: 242983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/15/15 12:30	05/16/15 15:36	1
Magnesium	ND		0.20	0.043	mg/L		05/15/15 12:30	05/16/15 15:36	1
Manganese	ND		0.0030	0.00040	mg/L		05/15/15 12:30	05/16/15 15:36	1

Lab Sample ID: LCS 480-242652/2-A
Matrix: Water
Analysis Batch: 242983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.39		mg/L		94	80 - 120
Magnesium	10.0	9.26		mg/L		93	80 - 120
Manganese	0.200	0.186		mg/L		93	80 - 120

Lab Sample ID: 480-80408-1 MS
Matrix: Water
Analysis Batch: 242983

Client Sample ID: MW-6-F-8-051415
Prep Type: Total/NA
Prep Batch: 242652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		10.0	9.17		mg/L		92	75 - 125
Magnesium	195		10.0	202.3	4	mg/L		72	75 - 125
Manganese	0.24		0.200	0.419		mg/L		90	75 - 125

Lab Sample ID: 480-80408-1 MSD
Matrix: Water
Analysis Batch: 242983

Client Sample ID: MW-6-F-8-051415
Prep Type: Total/NA
Prep Batch: 242652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	ND		10.0	9.11		mg/L		91	75 - 125	1	20
Magnesium	195		10.0	199.9	4	mg/L		48	75 - 125	1	20
Manganese	0.24		0.200	0.418		mg/L		89	75 - 125	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-243127/28
Matrix: Water
Analysis Batch: 243127

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			05/18/15 20:06	1
Sulfate	ND		2.0	0.35	mg/L			05/18/15 20:06	1

Lab Sample ID: MB 480-243127/52 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243127

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/18/15 23:22	1
Sulfate	ND		2.0	0.35	mg/L			05/18/15 23:22	1

Lab Sample ID: LCS 480-243127/27 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.50		mg/L		102	83 - 121
Sulfate	20.0	20.79		mg/L		104	80 - 129

Lab Sample ID: LCS 480-243127/51 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.75		mg/L		104	83 - 121
Sulfate	20.0	20.91		mg/L		105	80 - 129

Lab Sample ID: 480-80408-4 MS — **Client Sample ID: MW-8-003B-051415**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243127

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	775		1250	2097		mg/L		106	83 - 121
Sulfate	71.1	J	1250	1375		mg/L		104	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-243133/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243133

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/18/15 13:12	1

Lab Sample ID: MB 480-243133/51 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243133

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/18/15 13:33	1

Lab Sample ID: LCS 480-243133/28 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.05		mg/L		105	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-243133/52
Matrix: Water
Analysis Batch: 243133

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: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-242831/3
Matrix: Water
Analysis Batch: 242831

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			05/15/15 21:16	1

Lab Sample ID: LCS 480-242831/4
Matrix: Water
Analysis Batch: 242831

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	1.63		mg/L		109	90 - 110

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

Lab Sample ID: MB 480-243607/51
Matrix: Water
Analysis Batch: 243607

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			05/19/15 18:59	1

Lab Sample ID: MB 480-243607/75
Matrix: Water
Analysis Batch: 243607

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			05/20/15 06:16	1

Lab Sample ID: LCS 480-243607/52
Matrix: Water
Analysis Batch: 243607

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	57.23		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243607/76
Matrix: Water
Analysis Batch: 243607

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	57.62		mg/L		96	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243288/30
Matrix: Water
Analysis Batch: 243288

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.54	J	5.0	0.79	mg/L			05/18/15 21:38	1

Lab Sample ID: MB 480-243288/7
Matrix: Water
Analysis Batch: 243288

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			05/18/15 19:12	1

Lab Sample ID: LCS 480-243288/31
Matrix: Water
Analysis Batch: 243288

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	94.55		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243288/8
Matrix: Water
Analysis Batch: 243288

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	93.71		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-242891/3
Matrix: Water
Analysis Batch: 242891

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			05/16/15 12:37	1

Lab Sample ID: LCS 480-242891/4
Matrix: Water
Analysis Batch: 242891

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	0.697		mg/L		93	90 - 110

QC Association Summary

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

TestAmerica Job ID: 480-80408-1

GC/MS VOA

Analysis Batch: 244054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	8260C	
480-80408-2	MW-6-2-051415	Total/NA	Water	8260C	
480-80408-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-244054/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-244054/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 244230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-4	MW-8-003B-051415	Total/NA	Water	8260C	
LCS 480-244230/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-244230/6	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	RSK-175	
480-80408-2	MW-6-2-051415	Total/NA	Water	RSK-175	
480-80408-4	MW-8-003B-051415	Total/NA	Water	RSK-175	
LCS 200-88704/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88704/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 242629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	RSK-175	
480-80408-2	MW-6-2-051415	Total/NA	Water	RSK-175	
480-80408-4	MW-8-003B-051415	Total/NA	Water	RSK-175	
LCS 480-242629/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-242629/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-242629/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 242652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	3005A	
480-80408-1 MS	MW-6-F-8-051415	Total/NA	Water	3005A	
480-80408-1 MSD	MW-6-F-8-051415	Total/NA	Water	3005A	
480-80408-2	MW-6-2-051415	Total/NA	Water	3005A	
480-80408-4	MW-8-003B-051415	Total/NA	Water	3005A	
LCS 480-242652/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-242652/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 242983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	6010C	242652
480-80408-1 MS	MW-6-F-8-051415	Total/NA	Water	6010C	242652
480-80408-1 MSD	MW-6-F-8-051415	Total/NA	Water	6010C	242652
480-80408-2	MW-6-2-051415	Total/NA	Water	6010C	242652
480-80408-4	MW-8-003B-051415	Total/NA	Water	6010C	242652

Metals (Continued)

Analysis Batch: 242983 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-242652/2-A	Lab Control Sample	Total/NA	Water	6010C	242652
MB 480-242652/1-A	Method Blank	Total/NA	Water	6010C	242652

General Chemistry

Analysis Batch: 242831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	353.2	
480-80408-2	MW-6-2-051415	Total/NA	Water	353.2	
480-80408-4	MW-8-003B-051415	Total/NA	Water	353.2	
LCS 480-242831/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-242831/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 242837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	353.2	
480-80408-2	MW-6-2-051415	Total/NA	Water	353.2	
480-80408-4	MW-8-003B-051415	Total/NA	Water	353.2	

Analysis Batch: 242891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	SM 4500 S2 D	
480-80408-2	MW-6-2-051415	Total/NA	Water	SM 4500 S2 D	
480-80408-4	MW-8-003B-051415	Total/NA	Water	SM 4500 S2 D	
LCS 480-242891/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-242891/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 243127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	300.0	
480-80408-2	MW-6-2-051415	Total/NA	Water	300.0	
480-80408-4	MW-8-003B-051415	Total/NA	Water	300.0	
480-80408-4 MS	MW-8-003B-051415	Total/NA	Water	300.0	
LCS 480-243127/27	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-243127/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-243127/28	Method Blank	Total/NA	Water	300.0	
MB 480-243127/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 243133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	350.1	
480-80408-2	MW-6-2-051415	Total/NA	Water	350.1	
480-80408-4	MW-8-003B-051415	Total/NA	Water	350.1	
LCS 480-243133/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-243133/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-243133/27	Method Blank	Total/NA	Water	350.1	
MB 480-243133/51	Method Blank	Total/NA	Water	350.1	

General Chemistry (Continued)

Analysis Batch: 243288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	SM 2320B	
480-80408-2	MW-6-2-051415	Total/NA	Water	SM 2320B	
480-80408-4	MW-8-003B-051415	Total/NA	Water	SM 2320B	
LCS 480-243288/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-243288/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243288/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-243288/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80408-1	MW-6-F-8-051415	Total/NA	Water	9060A	
480-80408-2	MW-6-2-051415	Total/NA	Water	9060A	
480-80408-4	MW-8-003B-051415	Total/NA	Water	9060A	
LCS 480-243607/52	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-243607/76	Lab Control Sample	Total/NA	Water	9060A	
MB 480-243607/51	Method Blank	Total/NA	Water	9060A	
MB 480-243607/75	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-80408-1

Client Sample ID: MW-6-F-8-051415

Date Collected: 05/14/15 09:45
Date Received: 05/14/15 16:50

Lab Sample ID: 480-80408-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	244054	05/22/15 11:53	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88704	05/26/15 11:29	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242629	05/15/15 10:59	JMO	TAL BUF
Total/NA	Prep	3005A			242652	05/15/15 12:30	KJ1	TAL BUF
Total/NA	Analysis	6010C		1	242983	05/16/15 15:41	SLB	TAL BUF
Total/NA	Analysis	300.0		100	243127	05/18/15 23:46	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243133	05/18/15 13:43	STD	TAL BUF
Total/NA	Analysis	353.2		1	242831	05/15/15 21:22	MRF	TAL BUF
Total/NA	Analysis	353.2		1	242837	05/15/15 21:22	MRF	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/20/15 08:08	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/18/15 23:07	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: MW-6-2-051415

Date Collected: 05/14/15 14:05
Date Received: 05/14/15 16:50

Lab Sample ID: 480-80408-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	244054	05/22/15 12:16	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88704	05/26/15 11:37	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242629	05/15/15 11:16	JMO	TAL BUF
Total/NA	Prep	3005A			242652	05/15/15 12:30	KJ1	TAL BUF
Total/NA	Analysis	6010C		1	242983	05/16/15 16:04	SLB	TAL BUF
Total/NA	Analysis	300.0		50	243127	05/18/15 23:54	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243133	05/18/15 13:44	STD	TAL BUF
Total/NA	Analysis	353.2		1	242831	05/15/15 21:23	MRF	TAL BUF
Total/NA	Analysis	353.2		1	242837	05/15/15 21:23	MRF	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/20/15 08:36	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/18/15 23:14	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/14/15 00:00
Date Received: 05/14/15 16:50

Lab Sample ID: 480-80408-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	244054	05/22/15 12:39	GTG	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-80408-1

Client Sample ID: MW-8-003B-051415

Date Collected: 05/14/15 16:25
Date Received: 05/14/15 16:50

Lab Sample ID: 480-80408-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	244230	05/22/15 23:17	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	88704	05/26/15 11:48	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242629	05/15/15 11:34	JMO	TAL BUF
Total/NA	Prep	3005A			242652	05/15/15 12:30	KJ1	TAL BUF
Total/NA	Analysis	6010C		1	242983	05/16/15 16:07	SLB	TAL BUF
Total/NA	Analysis	300.0		50	243127	05/19/15 00:02	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243133	05/18/15 13:45	STD	TAL BUF
Total/NA	Analysis	353.2		1	242831	05/15/15 21:25	MRF	TAL BUF
Total/NA	Analysis	353.2		1	242837	05/15/15 21:25	MRF	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/20/15 09:04	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/18/15 23:21	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	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: 480-80408-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80408-1

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: 480-80408-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80408-1	MW-6-F-8-051415	Water	05/14/15 09:45	05/14/15 16:50
480-80408-2	MW-6-2-051415	Water	05/14/15 14:05	05/14/15 16:50
480-80408-3	TRIP BLANK	Water	05/14/15 00:00	05/14/15 16:50
480-80408-4	MW-8-003B-051415	Water	05/14/15 16:25	05/14/15 16:50

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. WULF	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)				Total Number of containers	Special Instructions/Note:
Preservation Code:							N	S	D	A	A	A	CB	N	N	N					
MW-6-F-8-051415	5/14/15	0945	G	Water	N	H	X	X	X	X	X	X	X	X	X	X					
MW-6-Z-051415	5/14/15	1405	G	Water	N	N	X	X	X	X	X	X	X	X	X	X					
TRIP BLANK	5/14/15			Water	N	H				X											
MW-8-003B-051415	5/14/15	1625	G	Water	N	N	X	X	X	X	X	X	X	X	X	X					
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

480-80408 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Dale E. Wulf	Date/Time: 5/14/15 16:50	Company	Received by:	Date/Time: 5/14/15 1650	Company TA Buff
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 3.4

5/28/2015

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24119.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80408-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/27/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-6-F-8-051415 (480-80408-1)	5/14/15	09:45 Eastern		Water			X	3	
MW-6-2-051415 (480-80408-2)	5/14/15	14:05 Eastern		Water			X	3	
MW-8-003B-051415 (480-80408-4)	5/14/15	16:25 Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed
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:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cameron Wallace	5-15-15 1100	TAB		5/16/15 0930	TABY
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 15MAY15
ACTWGT: 33.5 LB
CAD: 846654/CAFE2807
DIMS: 23x16x15 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

TRK# 0201 5657 0118 4149

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BTVA

05403
VT-US BTV

Part # 156140V-434 RIT2 03/15

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 15MAY15
ACTWGT: 58.1 LB
CAD: 846654/CAFE2807
DIMS: 23x16x15 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

TRK# 0201 5657 0118 4150

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BTVA

05403
VT-US BTV

Part # 156140V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80408-1

Login Number: 80408
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: 480-80408-1

Login Number: 80408
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/16/15 04:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455372,373
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	3.6ºC,3.6ºC
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.	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

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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: 480-80491-1

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:
5/29/2015 3:18:02 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80491-1

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
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
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
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: 480-80491-1

Job ID: 480-80491-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80491-1

Receipt
The samples were received on 5/15/2015 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

GC/MS VOA
Method(s) 8260C: The following samples was diluted to bring the concentration of target analytes within the calibration range: MW-7-C-2-051515 (480-80491-1) and MW-7-6-051515 (480-80491-2). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-7-C-2-051515 (480-80491-1), MW-7-6-051515 (480-80491-2) and (480-80491-G-1 MS). The sample was analyzed at a dilution based on screening results.

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: 480-80491-1

Client Sample ID: MW-7-C-2-051515 — Lab Sample ID: 480-80491-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	390		5.0	4.1	ug/L	5		8260C	Total/NA
Vinyl chloride	36		5.0	4.5	ug/L	5		8260C	Total/NA
Methane	68		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.40		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	111		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.19		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	246		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	639		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.48		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.7		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	294	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	9000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-6-051515 — Lab Sample ID: 480-80491-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	440		10	8.1	ug/L	10		8260C	Total/NA
Tetrachloroethene	430		10	3.6	ug/L	10		8260C	Total/NA
Trichloroethene	240		10	4.6	ug/L	10		8260C	Total/NA
Vinyl chloride	40		10	9.0	ug/L	10		8260C	Total/NA
Ethane	1.8	J	7.5	1.5	ug/L	1		RSK-175	Total/NA
Methane	36		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.092		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	85.9		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.19		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	4620		100	56.4	mg/L	200		300.0	Total/NA
Sulfate	100	J	400	69.8	mg/L	200		300.0	Total/NA
Ammonia	0.092		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	2.2		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	337	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	8800		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80491-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-7-C-2-051515 — Lab Sample ID: 480-80491-1

Date Collected: 05/15/15 11:10 — **Matrix: Water**
Date Received: 05/15/15 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**390**		5.0	4.1	ug/L			05/26/15 15:06	5
Tetrachloroethene	ND		5.0	1.8	ug/L			05/26/15 15:06	5
trans-1,2-Dichloroethene	ND		5.0	4.5	ug/L			05/26/15 15:06	5
Trichloroethene	ND		5.0	2.3	ug/L			05/26/15 15:06	5
Vinyl chloride	**36**		5.0	4.5	ug/L			05/26/15 15:06	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/26/15 15:06*	*5*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/26/15 15:06*	*5*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/26/15 15:06*	*5*
Dibromofluoromethane (Surr)	*103*		*60 - 140*		*05/26/15 15:06*	*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			05/16/15 14:37	1
Ethene	ND		7.0	1.5	ug/L			05/16/15 14:37	1
Methane	**68**		4.0	1.0	ug/L			05/16/15 14:37	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**9000**		1000	1000	ug/L			05/27/15 13:29	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.40**		0.050	0.019	mg/L		05/18/15 11:30	05/19/15 16:37	1
Magnesium	**111**		0.20	0.043	mg/L		05/18/15 11:30	05/19/15 16:37	1
Manganese	**0.19**		0.0030	0.00040	mg/L		05/18/15 11:30	05/19/15 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**246**		10.0	5.6	mg/L			05/20/15 18:22	20
Sulfate	**639**		40.0	7.0	mg/L			05/20/15 18:22	20
Ammonia	**0.48**		0.020	0.0090	mg/L			05/19/15 13:49	1
Nitrate	ND		0.050	0.020	mg/L			05/15/15 20:04	1
Nitrite	ND		0.050	0.020	mg/L			05/15/15 20:04	1
Total Organic Carbon	**1.7**		1.0	0.43	mg/L			05/21/15 16:04	1
Total Alkalinity	**294**	**B**	5.0	0.79	mg/L			05/19/15 01:17	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: MW-7-6-051515 — Lab Sample ID: 480-80491-2

Date Collected: 05/15/15 15:10 — **Matrix: Water**
Date Received: 05/15/15 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**440**		10	8.1	ug/L			05/26/15 15:30	10
Tetrachloroethene	**430**		10	3.6	ug/L			05/26/15 15:30	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			05/26/15 15:30	10
Trichloroethene	**240**		10	4.6	ug/L			05/26/15 15:30	10
Vinyl chloride	**40**		10	9.0	ug/L			05/26/15 15:30	10

Client Sample ID: MW-7-6-051515 — Lab Sample ID: 480-80491-2

Date Collected: 05/15/15 15:10 — **Matrix: Water**
Date Received: 05/15/15 16:15

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/26/15 15:30*	*10*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/26/15 15:30*	*10*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/26/15 15:30*	*10*
Dibromofluoromethane (Surr)	*100*		*60 - 140*		*05/26/15 15:30*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.8**	**J**	7.5	1.5	ug/L			05/16/15 14:55	1
Ethene	ND		7.0	1.5	ug/L			05/16/15 14:55	1
Methane	**36**		4.0	1.0	ug/L			05/16/15 14:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**8800**		1000	1000	ug/L			05/27/15 13:38	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.092**		0.050	0.019	mg/L		05/18/15 11:30	05/19/15 16:51	1
Magnesium	**85.9**		0.20	0.043	mg/L		05/18/15 11:30	05/19/15 16:51	1
Manganese	**0.19**		0.0030	0.00040	mg/L		05/18/15 11:30	05/19/15 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4620**		100	56.4	mg/L			05/20/15 19:11	200
Sulfate	**100**	**J**	400	69.8	mg/L			05/20/15 19:11	200
Ammonia	**0.092**		0.020	0.0090	mg/L			05/19/15 12:48	1
Nitrate	ND		0.050	0.020	mg/L			05/15/15 20:05	1
Nitrite	ND		0.050	0.020	mg/L			05/15/15 20:05	1
Total Organic Carbon	**2.2**		1.0	0.43	mg/L			05/21/15 16:56	1
Total Alkalinity	**337**	**B**	5.0	0.79	mg/L			05/19/15 01:24	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80491-3

Date Collected: 05/15/15 00:00 — **Matrix: Water**
Date Received: 05/15/15 16:15

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			05/26/15 13:06	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/26/15 13:06	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/26/15 13:06	1
Trichloroethene	ND		1.0	0.46	ug/L			05/26/15 13:06	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/26/15 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/26/15 13:06*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/26/15 13:06*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/26/15 13:06*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/26/15 13:06*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80491-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80491-1	MW-7-C-2-051515	101	96	100	103
480-80491-2	MW-7-6-051515	100	97	99	100
480-80491-3	TRIP BLANK	99	96	100	98
LCS 480-244371/5	Lab Control Sample	100	96	98	102
LCSD 480-244371/6	Lab Control Sample Dup	100	98	101	101
MB 480-244371/8	Method Blank	101	97	100	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-244371/8
Matrix: Water
Analysis Batch: 244371

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			05/26/15 12:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/26/15 12:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/26/15 12:15	1
Trichloroethene	ND		1.0	0.46	ug/L			05/26/15 12:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/26/15 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/26/15 12:15*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/26/15 12:15*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/26/15 12:15*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*05/26/15 12:15*	*1*

Lab Sample ID: LCS 480-244371/5
Matrix: Water
Analysis Batch: 244371

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	21.7		ug/L		87	74 - 124		
Tetrachloroethene			25.0	20.4		ug/L		82	74 - 122		
trans-1,2-Dichloroethene			25.0	20.6		ug/L		83	73 - 127		
Trichloroethene			25.0	21.0		ug/L		84	74 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*98*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Lab Sample ID: LCSD 480-244371/6
Matrix: Water
Analysis Batch: 244371

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	21.6		ug/L		86	74 - 124	0	15
Tetrachloroethene			25.0	20.4		ug/L		82	74 - 122	0	20
trans-1,2-Dichloroethene			25.0	20.9		ug/L		84	73 - 127	1	20
Trichloroethene			25.0	20.3		ug/L		81	74 - 123	3	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-242874/3
Matrix: Water
Analysis Batch: 242874

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			05/16/15 11:43	1
Ethene	ND		7.0	1.5	ug/L			05/16/15 11:43	1
Methane	ND		4.0	1.0	ug/L			05/16/15 11:43	1

Lab Sample ID: LCS 480-242874/4
Matrix: Water
Analysis Batch: 242874

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	15.4		ug/L		106	79 - 120
Ethene	13.6	13.9		ug/L		102	78 - 115
Methane	7.77	7.92		ug/L		102	71 - 118

Lab Sample ID: LCSD 480-242874/5
Matrix: Water
Analysis Batch: 242874

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	15.4		ug/L		106	79 - 120	0	50
Ethene	13.6	13.8		ug/L		102	78 - 115	1	50
Methane	7.77	8.00		ug/L		103	71 - 118	1	50

Lab Sample ID: MB 200-88799/3
Matrix: Water
Analysis Batch: 88799

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			05/27/15 13:20	1

Lab Sample ID: LCS 200-88799/2
Matrix: Water
Analysis Batch: 88799

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	5130		ug/L		102	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-243066/1-A
Matrix: Water
Analysis Batch: 243515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 243066

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/18/15 11:30	05/19/15 16:32	1
Magnesium	ND		0.20	0.043	mg/L		05/18/15 11:30	05/19/15 16:32	1
Manganese	ND		0.0030	0.00040	mg/L		05/18/15 11:30	05/19/15 16:32	1

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

Lab Sample ID: LCS 480-243066/2-A
Matrix: Water
Analysis Batch: 243515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243066

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.93		mg/L		99	80 - 120
Magnesium	10.0	10.24		mg/L		102	80 - 120
Manganese	0.200	0.199		mg/L		100	80 - 120

Lab Sample ID: 480-80491-1 MS
Matrix: Water
Analysis Batch: 243515

Client Sample ID: MW-7-C-2-051515
Prep Type: Total/NA
Prep Batch: 243066

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.40		10.0	10.13		mg/L		97	75 - 125
Magnesium	111		10.0	122.1	4	mg/L		112	75 - 125
Manganese	0.19		0.200	0.369		mg/L		90	75 - 125

Lab Sample ID: 480-80491-1 MSD
Matrix: Water
Analysis Batch: 243515

Client Sample ID: MW-7-C-2-051515
Prep Type: Total/NA
Prep Batch: 243066

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.40		10.0	9.97		mg/L		96	75 - 125	2	20
Magnesium	111		10.0	121.0	4	mg/L		102	75 - 125	1	20
Manganese	0.19		0.200	0.367		mg/L		89	75 - 125	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-243303/52
Matrix: Water
Analysis Batch: 243303

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			05/20/15 15:47	1
Sulfate	ND		2.0	0.35	mg/L			05/20/15 15:47	1

Lab Sample ID: MB 480-243303/76
Matrix: Water
Analysis Batch: 243303

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			05/20/15 19:02	1
Sulfate	ND		2.0	0.35	mg/L			05/20/15 19:02	1

Lab Sample ID: LCS 480-243303/51
Matrix: Water
Analysis Batch: 243303

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	20.82		mg/L		104	83 - 121
Sulfate	20.0	21.22		mg/L		106	80 - 129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-243303/75
Matrix: Water
Analysis Batch: 243303

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	20.99		mg/L		105	83 - 121
Sulfate	20.0	21.34		mg/L		107	80 - 129

Lab Sample ID: 480-80491-1 MS
Matrix: Water
Analysis Batch: 243303

Client Sample ID: MW-7-C-2-051515
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	246		500	795.0		mg/L		110	83 - 121
Sulfate	639		500	1162		mg/L		105	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-243380/123
Matrix: Water
Analysis Batch: 243380

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			05/19/15 13:24	1

Lab Sample ID: MB 480-243380/147
Matrix: Water
Analysis Batch: 243380

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			05/19/15 13:45	1

Lab Sample ID: MB 480-243380/51
Matrix: Water
Analysis Batch: 243380

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			05/19/15 12:21	1

Lab Sample ID: MB 480-243380/75
Matrix: Water
Analysis Batch: 243380

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			05/19/15 12:42	1

Lab Sample ID: MB 480-243380/99
Matrix: Water
Analysis Batch: 243380

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			05/19/15 13:03	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-243380/100
Matrix: Water
Analysis Batch: 243380

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

Lab Sample ID: LCS 480-243380/124
Matrix: Water
Analysis Batch: 243380

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	1.06		mg/L		106	90 - 110

Lab Sample ID: LCS 480-243380/148
Matrix: Water
Analysis Batch: 243380

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

Lab Sample ID: LCS 480-243380/52
Matrix: Water
Analysis Batch: 243380

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

Lab Sample ID: LCS 480-243380/76
Matrix: Water
Analysis Batch: 243380

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 480-244137/28
Matrix: Water
Analysis Batch: 244137

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	0.444	J	1.0	0.43	mg/L			05/21/15 19:10	1

Lab Sample ID: MB 480-244137/4
Matrix: Water
Analysis Batch: 244137

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			05/21/15 08:33	1

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

Lab Sample ID: LCS 480-244137/29
Matrix: Water
Analysis Batch: 244137

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	59.28		mg/L		99	90 - 110

Lab Sample ID: LCS 480-244137/5
Matrix: Water
Analysis Batch: 244137

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	59.87		mg/L		100	90 - 110

Lab Sample ID: 480-80491-1 DU
Matrix: Water
Analysis Batch: 244137

Client Sample ID: MW-7-C-2-051515
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	1.7		1.67		mg/L		2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243288/30
Matrix: Water
Analysis Batch: 243288

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.54	J	5.0	0.79	mg/L			05/18/15 21:38	1

Lab Sample ID: MB 480-243288/54
Matrix: Water
Analysis Batch: 243288

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.58	J	5.0	0.79	mg/L			05/19/15 00:10	1

Lab Sample ID: LCS 480-243288/31
Matrix: Water
Analysis Batch: 243288

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	94.55		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243288/55
Matrix: Water
Analysis Batch: 243288

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	95.97		mg/L		96	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-242891/3
Matrix: Water
Analysis Batch: 242891

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			05/16/15 12:37	1

Lab Sample ID: LCS 480-242891/4
Matrix: Water
Analysis Batch: 242891

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	0.697		mg/L		93	90 - 110

QC Association Summary

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

TestAmerica Job ID: 480-80491-1

GC/MS VOA

Analysis Batch: 244371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	8260C	
480-80491-2	MW-7-6-051515	Total/NA	Water	8260C	
480-80491-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-244371/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-244371/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-244371/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	RSK-175	
480-80491-2	MW-7-6-051515	Total/NA	Water	RSK-175	
LCS 200-88799/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88799/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 242874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	RSK-175	
480-80491-2	MW-7-6-051515	Total/NA	Water	RSK-175	
LCS 480-242874/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-242874/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-242874/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 243066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	3005A	
480-80491-1 MS	MW-7-C-2-051515	Total/NA	Water	3005A	
480-80491-1 MSD	MW-7-C-2-051515	Total/NA	Water	3005A	
480-80491-2	MW-7-6-051515	Total/NA	Water	3005A	
LCS 480-243066/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-243066/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 243515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	6010C	243066
480-80491-1 MS	MW-7-C-2-051515	Total/NA	Water	6010C	243066
480-80491-1 MSD	MW-7-C-2-051515	Total/NA	Water	6010C	243066
480-80491-2	MW-7-6-051515	Total/NA	Water	6010C	243066
LCS 480-243066/2-A	Lab Control Sample	Total/NA	Water	6010C	243066
MB 480-243066/1-A	Method Blank	Total/NA	Water	6010C	243066

General Chemistry

Analysis Batch: 242835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	353.2	
480-80491-2	MW-7-6-051515	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 242836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	353.2	
480-80491-2	MW-7-6-051515	Total/NA	Water	353.2	

Analysis Batch: 242891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	SM 4500 S2 D	
480-80491-2	MW-7-6-051515	Total/NA	Water	SM 4500 S2 D	
LCS 480-242891/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-242891/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 243288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	SM 2320B	
480-80491-2	MW-7-6-051515	Total/NA	Water	SM 2320B	
LCS 480-243288/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-243288/55	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243288/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-243288/54	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	300.0	
480-80491-1 MS	MW-7-C-2-051515	Total/NA	Water	300.0	
480-80491-2	MW-7-6-051515	Total/NA	Water	300.0	
LCS 480-243303/51	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-243303/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-243303/52	Method Blank	Total/NA	Water	300.0	
MB 480-243303/76	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 243380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	350.1	
480-80491-2	MW-7-6-051515	Total/NA	Water	350.1	
LCS 480-243380/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-243380/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-243380/148	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-243380/52	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-243380/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-243380/123	Method Blank	Total/NA	Water	350.1	
MB 480-243380/147	Method Blank	Total/NA	Water	350.1	
MB 480-243380/51	Method Blank	Total/NA	Water	350.1	
MB 480-243380/75	Method Blank	Total/NA	Water	350.1	
MB 480-243380/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 244137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80491-1	MW-7-C-2-051515	Total/NA	Water	9060A	
480-80491-1 DU	MW-7-C-2-051515	Total/NA	Water	9060A	
480-80491-2	MW-7-6-051515	Total/NA	Water	9060A	
LCS 480-244137/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-244137/5	Lab Control Sample	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 244137 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-244137/28	Method Blank	Total/NA	Water	9060A	
MB 480-244137/4	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-80491-1

Client Sample ID: MW-7-C-2-051515

Date Collected: 05/15/15 11:10
Date Received: 05/15/15 16:15

Lab Sample ID: 480-80491-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	244371	05/26/15 15:06	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88799	05/27/15 13:29	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242874	05/16/15 14:37	JMO	TAL BUF
Total/NA	Prep	3005A			243066	05/18/15 11:30	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243515	05/19/15 16:37	AMH	TAL BUF
Total/NA	Analysis	300.0		20	243303	05/20/15 18:22	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243380	05/19/15 13:49	STD	TAL BUF
Total/NA	Analysis	353.2		1	242835	05/15/15 20:04	MRF	TAL BUF
Total/NA	Analysis	353.2		1	242836	05/15/15 20:04	MRF	TAL BUF
Total/NA	Analysis	9060A		1	244137	05/21/15 16:04	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/19/15 01:17	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: MW-7-6-051515

Date Collected: 05/15/15 15:10
Date Received: 05/15/15 16:15

Lab Sample ID: 480-80491-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	244371	05/26/15 15:30	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88799	05/27/15 13:38	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242874	05/16/15 14:55	JMO	TAL BUF
Total/NA	Prep	3005A			243066	05/18/15 11:30	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243515	05/19/15 16:51	AMH	TAL BUF
Total/NA	Analysis	300.0		200	243303	05/20/15 19:11	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243380	05/19/15 12:48	STD	TAL BUF
Total/NA	Analysis	353.2		1	242835	05/15/15 20:05	MRF	TAL BUF
Total/NA	Analysis	353.2		1	242836	05/15/15 20:05	MRF	TAL BUF
Total/NA	Analysis	9060A		1	244137	05/21/15 16:56	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/19/15 01:24	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/15/15 00:00
Date Received: 05/15/15 16:15

Lab Sample ID: 480-80491-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	244371	05/26/15 13:06	GTG	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: 480-80491-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80491-1

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: 480-80491-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80491-1	MW-7-C-2-051515	Water	05/15/15 11:10	05/15/15 16:15
480-80491-2	MW-7-6-051515	Water	05/15/15 15:10	05/15/15 16:15
480-80491-3	TRIP BLANK	Water	05/15/15 00:00	05/15/15 16:15

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. WOLF	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone: 716-844-7050	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N		
MW-7-C-2-051515	5/15/15	1110	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
MW-7-6-051515	5/15/15	1510	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/15/15			Water	N	N				X								
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80491 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Dal G. Wolf	5/15/15 16:15			5/15/15 1615	TA Buff
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: #1 3.8

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

Chain of Custody Record

480-80491 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	COC No: 480-24175.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.			Job #: 480-80491-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/28/2015		
City: South Burlington	TAT Requested (days):		
State, Zip: VT, 05403			
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:		
Email:	WO #:		
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X		X	
MW-7-C-2-051515 (480-80491-1)	5/15/15	11:10 Eastern		Water			X	3	
MW-7-6-051515 (480-80491-2)	5/15/15	15:10 Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed

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*

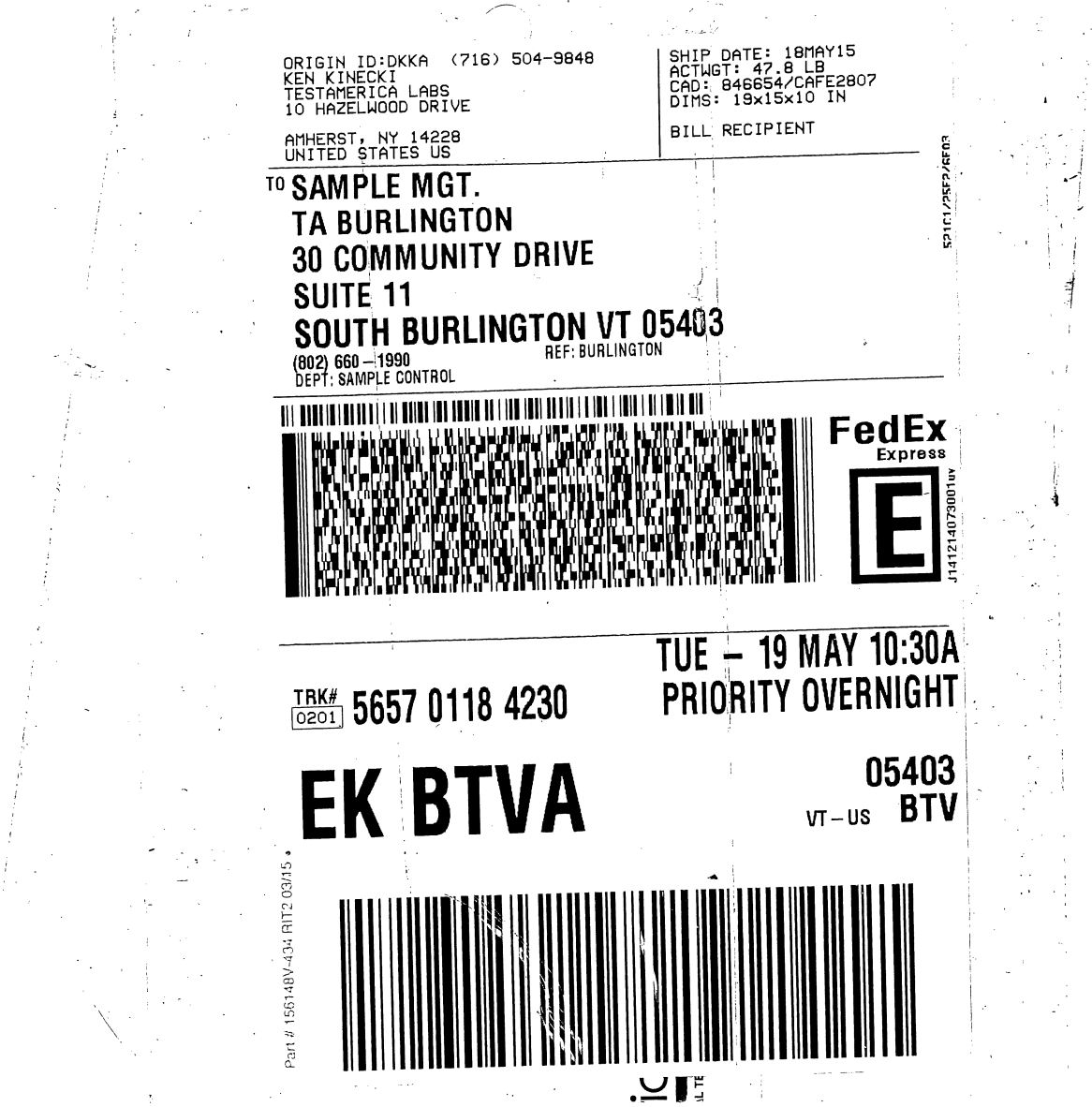
Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/18/15 1700	TA Buff		5/19/15 1000	TAGJ ✓
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/29/2015



ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 18MAY15
ACTWGT: 47.8 LB
CAD: 846654/CAFE2807
DIMS: 19x15x10 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
DEPT: SAMPLE CONTROL

REF: BURLINGTON

FedEx
Express

TUE - 19 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 5657 0118 4230

EK BTVA

05403
VT - US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80491-1

Login Number: 80491
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: 480-80491-1

Login Number: 80491
List Number: 2
Creator: Atherton, Joel E

List Source: TestAmerica Burlington
List Creation: 05/19/15 11:41 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455386
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	4.0ºC
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.	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	

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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: 480-80560-1
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:
5/29/2015 3:49:54 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

Table of Contents

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc. TestAmerica Job ID: 480-80560-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

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.
B	Compound was found in the blank and sample.

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. TestAmerica Job ID: 480-80560-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Job ID: 480-80560-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80560-1

Receipt
The samples were received on 5/18/2015 4:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
Method(s) 8260C: The following samples was diluted to bring the concentration of target analytes within the calibration range: MW-7-5-051515 (480-80560-1) and MW-7-A-6-051815 (480-80560-2). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-7-5-051515 (480-80560-1), MW-7-A-6-051815 (480-80560-2). The samples were analyzed at a dilution based on screening results.

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-6-051815 (480-80560-2). 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.

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: 480-80560-1

Client Sample ID: MW-7-5-051515 — Lab Sample ID: 480-80560-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	460		100	81	ug/L	100		8260C	Total/NA
Tetrachloroethene	5400		100	36	ug/L	100		8260C	Total/NA
Trichloroethene	580		100	46	ug/L	100		8260C	Total/NA
Methane	3.4	J	4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.13		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	142		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.1		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	4430		100	56.4	mg/L	200		300.0	Total/NA
Sulfate	285	J	400	69.8	mg/L	200		300.0	Total/NA
Nitrate	2.0		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.045	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	3.4	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	357		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-7-A-6-051815 — Lab Sample ID: 480-80560-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	28000		5000	4100	ug/L	5000		8260C	Total/NA
Tetrachloroethene	120000		5000	1800	ug/L	5000		8260C	Total/NA
Trichloroethene	19000		5000	2300	ug/L	5000		8260C	Total/NA
Ethane	11		7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	79		7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane	400		40	10	ug/L	10		RSK-175	Total/NA
Iron	0.28		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	124		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.1		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	937		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	69.4	J	100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.074		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	10.2	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	451		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	21000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80560-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-7-5-051515 — Lab Sample ID: 480-80560-1

Date Collected: 05/18/15 10:35 — **Matrix: Water**
Date Received: 05/18/15 16:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**460**		100	81	ug/L			05/26/15 16:19	100
Tetrachloroethene	**5400**		100	36	ug/L			05/26/15 16:19	100
trans-1,2-Dichloroethene	ND		100	90	ug/L			05/26/15 16:19	100
Trichloroethene	**580**		100	46	ug/L			05/26/15 16:19	100
Vinyl chloride	ND		100	90	ug/L			05/26/15 16:19	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/26/15 16:19*	*100*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/26/15 16:19*	*100*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/26/15 16:19*	*100*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/26/15 16:19*	*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			05/22/15 10:50	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 10:50	1
Methane	**3.4**	**J**	4.0	1.0	ug/L			05/22/15 10:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**20000**		1000	1000	ug/L			05/27/15 14:13	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.13**		0.050	0.019	mg/L		05/19/15 11:33	05/20/15 20:11	1
Magnesium	**142**		0.20	0.043	mg/L		05/19/15 11:33	05/20/15 20:11	1
Manganese	**1.1**		0.0030	0.00040	mg/L		05/19/15 11:33	05/20/15 20:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4430**		100	56.4	mg/L			05/20/15 20:20	200
Sulfate	**285**	**J**	400	69.8	mg/L			05/20/15 20:20	200
Ammonia	ND		0.020	0.0090	mg/L			05/19/15 13:36	1
Nitrate	**2.0**		0.050	0.020	mg/L			05/19/15 14:24	1
Nitrite	**0.045**	**J**	0.050	0.020	mg/L			05/19/15 14:59	1
Total Organic Carbon	**3.4**	**B**	1.0	0.43	mg/L			05/22/15 06:48	1
Total Alkalinity	**357**		5.0	0.79	mg/L			05/19/15 15:44	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: MW-7-A-6-051815 — Lab Sample ID: 480-80560-2

Date Collected: 05/18/15 14:15 — **Matrix: Water**
Date Received: 05/18/15 16:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**28000**		5000	4100	ug/L			05/26/15 16:43	5000
Tetrachloroethene	**120000**		5000	1800	ug/L			05/26/15 16:43	5000
trans-1,2-Dichloroethene	ND		5000	4500	ug/L			05/26/15 16:43	5000
Trichloroethene	**19000**		5000	2300	ug/L			05/26/15 16:43	5000
Vinyl chloride	ND		5000	4500	ug/L			05/26/15 16:43	5000

Client Sample ID: MW-7-A-6-051815 — Lab Sample ID: 480-80560-2

Date Collected: 05/18/15 14:15 — **Matrix: Water**
Date Received: 05/18/15 16:10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/26/15 16:43*	*5000*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/26/15 16:43*	*5000*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/26/15 16:43*	*5000*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*05/26/15 16:43*	*5000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**11**		7.5	1.5	ug/L			05/22/15 11:08	1
Ethene	**79**		7.0	1.5	ug/L			05/22/15 11:08	1
Methane	**400**		40	10	ug/L			05/22/15 12:53	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**21000**		1000	1000	ug/L			05/27/15 14:23	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.28**		0.050	0.019	mg/L		05/19/15 11:33	05/20/15 20:14	1
Magnesium	**124**		0.20	0.043	mg/L		05/19/15 11:33	05/20/15 20:14	1
Manganese	**1.1**		0.0030	0.00040	mg/L		05/19/15 11:33	05/20/15 20:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**937**		25.0	14.1	mg/L			05/20/15 20:35	50
Sulfate	**69.4**	**J**	100	17.5	mg/L			05/20/15 20:35	50
Ammonia	**0.074**		0.020	0.0090	mg/L			05/20/15 18:17	1
Nitrate	ND		0.050	0.020	mg/L			05/19/15 16:45	1
Nitrite	ND		0.050	0.020	mg/L			05/19/15 16:45	1
Total Organic Carbon	**10.2**	**B**	1.0	0.43	mg/L			05/22/15 07:44	1
Total Alkalinity	**451**		5.0	0.79	mg/L			05/19/15 15:52	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80560-3

Date Collected: 05/18/15 00:00 — **Matrix: Water**
Date Received: 05/18/15 16:10

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			05/26/15 13:54	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/26/15 13:54	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/26/15 13:54	1
Trichloroethene	ND		1.0	0.46	ug/L			05/26/15 13:54	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/26/15 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/26/15 13:54*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/26/15 13:54*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/26/15 13:54*	*1*
Dibromofluoromethane (Surr)	*103*		*60 - 140*		*05/26/15 13:54*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80560-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80560-1	MW-7-5-051515	101	95	97	102
480-80560-2	MW-7-A-6-051815	101	98	101	101
480-80560-3	TRIP BLANK	101	98	98	103
LCS 480-244371/5	Lab Control Sample	100	96	98	102
LCSD 480-244371/6	Lab Control Sample Dup	100	98	101	101
MB 480-244371/8	Method Blank	101	97	100	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-244371/8
Matrix: Water
Analysis Batch: 244371

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			05/26/15 12:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/26/15 12:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/26/15 12:15	1
Trichloroethene	ND		1.0	0.46	ug/L			05/26/15 12:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/26/15 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/26/15 12:15*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/26/15 12:15*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/26/15 12:15*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*05/26/15 12:15*	*1*

Lab Sample ID: LCS 480-244371/5
Matrix: Water
Analysis Batch: 244371

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	21.7		ug/L		87	74 - 124		
Tetrachloroethene			25.0	20.4		ug/L		82	74 - 122		
trans-1,2-Dichloroethene			25.0	20.6		ug/L		83	73 - 127		
Trichloroethene			25.0	21.0		ug/L		84	74 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*98*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Lab Sample ID: LCSD 480-244371/6
Matrix: Water
Analysis Batch: 244371

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	21.6		ug/L		86	74 - 124	0	15
Tetrachloroethene			25.0	20.4		ug/L		82	74 - 122	0	20
trans-1,2-Dichloroethene			25.0	20.9		ug/L		84	73 - 127	1	20
Trichloroethene			25.0	20.3		ug/L		81	74 - 123	3	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-244094/3
Matrix: Water
Analysis Batch: 244094

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			05/22/15 09:58	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 09:58	1
Methane	ND		4.0	1.0	ug/L			05/22/15 09:58	1

Lab Sample ID: LCS 480-244094/4
Matrix: Water
Analysis Batch: 244094

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	14.8		ug/L		101	79 - 120
Ethene	13.6	13.0		ug/L		96	78 - 115
Methane	7.77	7.78		ug/L		100	71 - 118

Lab Sample ID: LCSD 480-244094/5
Matrix: Water
Analysis Batch: 244094

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	14.6		ug/L		101	79 - 120	1	50
Ethene	13.6	12.8		ug/L		94	78 - 115	1	50
Methane	7.77	7.75		ug/L		100	71 - 118	0	50

Lab Sample ID: MB 200-88799/3
Matrix: Water
Analysis Batch: 88799

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			05/27/15 13:20	1

Lab Sample ID: LCS 200-88799/2
Matrix: Water
Analysis Batch: 88799

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	5130		ug/L		102	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-243282/1-A
Matrix: Water
Analysis Batch: 243804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 243282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/19/15 11:33	05/20/15 19:26	1
Magnesium	ND		0.20	0.043	mg/L		05/19/15 11:33	05/20/15 19:26	1
Manganese	ND		0.0030	0.00040	mg/L		05/19/15 11:33	05/20/15 19:26	1

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

Lab Sample ID: LCS 480-243282/2-A
Matrix: Water
Analysis Batch: 243804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.46		mg/L		95	80 - 120
Magnesium	10.0	9.71		mg/L		97	80 - 120
Manganese	0.200	0.196		mg/L		98	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-243605/21
Matrix: Water
Analysis Batch: 243605

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			05/20/15 17:39	1
Sulfate	ND		2.0	0.35	mg/L			05/20/15 17:39	1

Lab Sample ID: MB 480-243605/4
Matrix: Water
Analysis Batch: 243605

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			05/20/15 11:52	1
Sulfate	ND		2.0	0.35	mg/L			05/20/15 11:52	1

Lab Sample ID: LCS 480-243605/20
Matrix: Water
Analysis Batch: 243605

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	19.73		mg/L		99	83 - 121
Sulfate	20.0	19.16		mg/L		96	80 - 129

Lab Sample ID: LCS 480-243605/3
Matrix: Water
Analysis Batch: 243605

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	19.23		mg/L		96	83 - 121
Sulfate	20.0	18.50		mg/L		93	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-243380/123
Matrix: Water
Analysis Batch: 243380

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			05/19/15 13:24	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-243380/124
Matrix: Water
Analysis Batch: 243380

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	1.06		mg/L		106	90 - 110

Lab Sample ID: MB 480-243712/3
Matrix: Water
Analysis Batch: 243712

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			05/20/15 18:11	1

Lab Sample ID: LCS 480-243712/4
Matrix: Water
Analysis Batch: 243712

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 480-243405/3
Matrix: Water
Analysis Batch: 243405

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			05/19/15 14:34	1

Lab Sample ID: LCS 480-243405/4
Matrix: Water
Analysis Batch: 243405

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 480-244137/28
Matrix: Water
Analysis Batch: 244137

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	0.444	J	1.0	0.43	mg/L			05/21/15 19:10	1

Lab Sample ID: MB 480-244137/52
Matrix: Water
Analysis Batch: 244137

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	0.449	J	1.0	0.43	mg/L			05/22/15 05:54	1

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

Lab Sample ID: LCS 480-244137/29
Matrix: Water
Analysis Batch: 244137

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	59.28		mg/L		99	90 - 110

Lab Sample ID: LCS 480-244137/53
Matrix: Water
Analysis Batch: 244137

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	59.14		mg/L		99	90 - 110

Lab Sample ID: 480-80560-2 MS
Matrix: Water
Analysis Batch: 244137

Client Sample ID: MW-7-A-6-051815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.2	B	20.0	29.29		mg/L		96	54 - 131

Lab Sample ID: 480-80560-1 DU
Matrix: Water
Analysis Batch: 244137

Client Sample ID: MW-7-5-051515
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	3.4	B	3.39		mg/L		0.2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243456/7
Matrix: Water
Analysis Batch: 243456

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			05/19/15 13:48	1

Lab Sample ID: LCS 480-243456/8
Matrix: Water
Analysis Batch: 243456

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	97.19		mg/L		97	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-244272/3
Matrix: Water
Analysis Batch: 244272

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			05/23/15 11:00	1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCS 480-244272/4
Matrix: Water
Analysis Batch: 244272

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	0.763		mg/L		102	90 - 110

GC/MS VOA

Analysis Batch: 244371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	8260C	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	8260C	
480-80560-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-244371/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-244371/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-244371/8	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	RSK-175	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	RSK-175	
LCS 200-88799/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88799/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	RSK-175	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	RSK-175	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	RSK-175	
LCS 480-244094/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244094/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244094/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 243282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	3005A	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	3005A	
LCS 480-243282/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-243282/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 243804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	6010C	243282
480-80560-2	MW-7-A-6-051815	Total/NA	Water	6010C	243282
LCS 480-243282/2-A	Lab Control Sample	Total/NA	Water	6010C	243282
MB 480-243282/1-A	Method Blank	Total/NA	Water	6010C	243282

General Chemistry

Analysis Batch: 243380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	350.1	
LCS 480-243380/124	Lab Control Sample	Total/NA	Water	350.1	
MB 480-243380/123	Method Blank	Total/NA	Water	350.1	

General Chemistry (Continued)

Analysis Batch: 243405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	353.2	
LCS 480-243405/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-243405/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 243424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	353.2	

Analysis Batch: 243456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	SM 2320B	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	SM 2320B	
LCS 480-243456/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243456/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-2	MW-7-A-6-051815	Total/NA	Water	353.2	

Analysis Batch: 243469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-2	MW-7-A-6-051815	Total/NA	Water	353.2	

Analysis Batch: 243605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	300.0	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	300.0	
LCS 480-243605/20	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-243605/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-243605/21	Method Blank	Total/NA	Water	300.0	
MB 480-243605/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 243712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-2	MW-7-A-6-051815	Total/NA	Water	350.1	
LCS 480-243712/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-243712/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 244137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	9060A	
480-80560-1 DU	MW-7-5-051515	Total/NA	Water	9060A	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	9060A	
480-80560-2 MS	MW-7-A-6-051815	Total/NA	Water	9060A	
LCS 480-244137/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-244137/53	Lab Control Sample	Total/NA	Water	9060A	
MB 480-244137/28	Method Blank	Total/NA	Water	9060A	
MB 480-244137/52	Method Blank	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 244272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80560-1	MW-7-5-051515	Total/NA	Water	SM 4500 S2 D	
480-80560-2	MW-7-A-6-051815	Total/NA	Water	SM 4500 S2 D	
LCS 480-244272/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-244272/3	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: 480-80560-1

Client Sample ID: MW-7-5-051515

Date Collected: 05/18/15 10:35
Date Received: 05/18/15 16:10

Lab Sample ID: 480-80560-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	244371	05/26/15 16:19	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88799	05/27/15 14:13	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244094	05/22/15 10:50	JMO	TAL BUF
Total/NA	Prep	3005A			243282	05/19/15 11:33	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243804	05/20/15 20:11	TRB	TAL BUF
Total/NA	Analysis	300.0		200	243605	05/20/15 20:20	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243380	05/19/15 13:36	STD	TAL BUF
Total/NA	Analysis	353.2		1	243424	05/19/15 14:24	NCH	TAL BUF
Total/NA	Analysis	353.2		1	243405	05/19/15 14:59	NCH	TAL BUF
Total/NA	Analysis	9060A		1	244137	05/22/15 06:48	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	243456	05/19/15 15:44	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: MW-7-A-6-051815

Date Collected: 05/18/15 14:15
Date Received: 05/18/15 16:10

Lab Sample ID: 480-80560-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5000	244371	05/26/15 16:43	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88799	05/27/15 14:23	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244094	05/22/15 11:08	JMO	TAL BUF
Total/NA	Analysis	RSK-175		10	244094	05/22/15 12:53	JMO	TAL BUF
Total/NA	Prep	3005A			243282	05/19/15 11:33	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243804	05/20/15 20:14	TRB	TAL BUF
Total/NA	Analysis	300.0		50	243605	05/20/15 20:35	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243712	05/20/15 18:17	STD	TAL BUF
Total/NA	Analysis	353.2		1	243466	05/19/15 16:45	CLT	TAL BUF
Total/NA	Analysis	353.2		1	243469	05/19/15 16:45	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244137	05/22/15 07:44	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	243456	05/19/15 15:52	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/18/15 00:00
Date Received: 05/18/15 16:10

Lab Sample ID: 480-80560-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	244371	05/26/15 13:54	GTG	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-80560-1

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: 480-80560-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80560-1

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: 480-80560-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80560-1	MW-7-5-051515	Water	05/18/15 10:35	05/18/15 16:10
480-80560-2	MW-7-A-6-051815	Water	05/18/15 14:15	05/18/15 16:10
480-80560-3	TRIP BLANK	Water	05/18/15 00:00	05/18/15 16:10

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. WOLF	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone: 716-844-7050	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastetoil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N		
MW-7-5-051815	5/18/15	1035	G	Water	N	H	X	X	X	X	X	X	X	X	X	X		
MW-7-A-6-051815	5/18/15	1415	G	Water	N	H	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/18/15	-		Water	N	N				X								
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80560 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by:	Date/Time: 5/18/15 16:10	Company	Received by:	Date/Time: 5/19/15 1610	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.5 #1

Page 23 of 27

5/29/2015

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24199.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80560-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/29/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7-5-051515 (480-80560-1)	5/18/15	10:35 Eastern		Water			X	3	
MW-7-A-6-051815 (480-80560-2)	5/18/15	14:15 Eastern		Water			X	3	

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 05/19/15 1700	Company TA	Received by:		Date/Time: 5/20/15 1020	Company TABTW	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/29/2015

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 19MAY15
ACTWGT: 18.5 LB
CAD: 846654/CAFE2807
DIMS: 22x14x11 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: TA BURLINGTON

FedEx Express

WED - 20 MAY AA
STANDARD OVERNIGHT

TRK# 0201 5657 0118 4344

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80560-1

Login Number: 80560
List Number: 1
Creator: Williams, Christopher S

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.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80560-1

Login Number: 80560
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/20/15 11:55 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455402
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	3.4ºC
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.	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: 480-80629-1
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:
5/29/2015 4:23:15 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80629-1

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.

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
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
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. TestAmerica Job ID: 480-80629-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Job ID: 480-80629-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80629-1

Receipt
The samples were received on 5/19/2015 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0º C.

GC/MS VOA
Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-7-051915 (480-80629-1), MW-10-2-051915 (480-80629-2) and MW-7-8-051915 (480-80629-3). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-7-8-051915 (480-80629-3). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-7-7-051915 (480-80629-1), MW-10-2-051915 (480-80629-2), MW-7-8-051915 (480-80629-3). The samples were analyzed at a dilution based on screening results.

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: 480-80629-1

Client Sample ID: MW-7-7-051915 — Lab Sample ID: 480-80629-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	13000		1000	810	ug/L	1000		8260C	Total/NA
Tetrachloroethene	70000		1000	360	ug/L	1000		8260C	Total/NA
Trichloroethene	3900		1000	460	ug/L	1000		8260C	Total/NA
Vinyl chloride	3500		1000	900	ug/L	1000		8260C	Total/NA
Ethane	18	J	75	15	ug/L	10		RSK-175	Total/NA
Ethene	290		70	15	ug/L	10		RSK-175	Total/NA
Methane	340		40	10	ug/L	10		RSK-175	Total/NA
Iron	0.11		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	169		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.024	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	2430		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	297		200	34.9	mg/L	100		300.0	Total/NA
Ammonia	0.20		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.083		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.067		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	14.3	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	228	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	1.9		0.50	0.26	mg/L	5		SM 4500 S2 D	Total/NA

Client Sample ID: MW-10-2-051915 — Lab Sample ID: 480-80629-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1300		20	16	ug/L	20		8260C	Total/NA
Tetrachloroethene	150		20	7.2	ug/L	20		8260C	Total/NA
trans-1,2-Dichloroethene	18	J	20	18	ug/L	20		8260C	Total/NA
Trichloroethene	140		20	9.2	ug/L	20		8260C	Total/NA
Vinyl chloride	38		20	18	ug/L	20		8260C	Total/NA
Methane	32		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.055		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	71.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.10	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1940		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	210		200	34.9	mg/L	100		300.0	Total/NA
Ammonia	0.38		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	1.9	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	348	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	6900		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-8-051915 — Lab Sample ID: 480-80629-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	140		4.0	1.4	ug/L	4		8260C	Total/NA
trans-1,2-Dichloroethene	3.8	J	4.0	3.6	ug/L	4		8260C	Total/NA
Trichloroethene	43		4.0	1.8	ug/L	4		8260C	Total/NA
Vinyl chloride	32		4.0	3.6	ug/L	4		8260C	Total/NA
cis-1,2-Dichloroethene - DL	790		20	16	ug/L	20		8260C	Total/NA
Ethane	14		7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	1.6	J	7.0	1.5	ug/L	1		RSK-175	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: 480-80629-1

Client Sample ID: MW-7-8-051915 (Continued)

Lab Sample ID: 480-80629-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	46		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	18.5		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	230		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.45	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	3550		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	270		200	34.9	mg/L	100		300.0	Total/NA
Ammonia	0.12		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.5	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	84.0	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	6400		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-80629-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7-7-051915 — Lab Sample ID: 480-80629-1

Date Collected: 05/19/15 11:20 — **Matrix: Water**
Date Received: 05/19/15 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	13000		1000	810	ug/L			05/27/15 15:41	1000
Tetrachloroethene	70000		1000	360	ug/L			05/27/15 15:41	1000
trans-1,2-Dichloroethene	ND		1000	900	ug/L			05/27/15 15:41	1000
Trichloroethene	3900		1000	460	ug/L			05/27/15 15:41	1000
Vinyl chloride	3500		1000	900	ug/L			05/27/15 15:41	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/27/15 15:41*	*1000*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/27/15 15:41*	*1000*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/27/15 15:41*	*1000*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*05/27/15 15:41*	*1000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	18	J	75	15	ug/L			05/22/15 12:00	10
Ethene	290		70	15	ug/L			05/22/15 12:00	10
Methane	340		40	10	ug/L			05/22/15 12:00	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/28/15 12:03	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.11		0.050	0.019	mg/L		05/20/15 08:18	05/20/15 18:35	1
Magnesium	169		0.20	0.043	mg/L		05/20/15 08:18	05/20/15 18:35	1
Manganese	0.024	B	0.0030	0.00040	mg/L		05/20/15 08:18	05/20/15 18:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2430		50.0	28.2	mg/L			05/20/15 20:49	100
Sulfate	297		200	34.9	mg/L			05/20/15 20:49	100
Ammonia	0.20		0.020	0.0090	mg/L			05/21/15 11:33	1
Nitrate	0.083		0.050	0.020	mg/L			05/19/15 21:31	1
Nitrite	0.067		0.050	0.020	mg/L			05/19/15 21:31	1
Total Organic Carbon	14.3	B	1.0	0.43	mg/L			05/23/15 05:19	1
Total Alkalinity	228	B	5.0	0.79	mg/L			05/19/15 16:30	1
Sulfide	1.9		0.50	0.26	mg/L			05/23/15 11:00	5

Client Sample ID: MW-10-2-051915 — Lab Sample ID: 480-80629-2

Date Collected: 05/19/15 14:20 — **Matrix: Water**
Date Received: 05/19/15 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1300		20	16	ug/L			05/27/15 16:04	20
Tetrachloroethene	150		20	7.2	ug/L			05/27/15 16:04	20
trans-1,2-Dichloroethene	18	J	20	18	ug/L			05/27/15 16:04	20
Trichloroethene	140		20	9.2	ug/L			05/27/15 16:04	20
Vinyl chloride	38		20	18	ug/L			05/27/15 16:04	20

Client Sample ID: MW-10-2-051915 — Lab Sample ID: 480-80629-2

Date Collected: 05/19/15 14:20 — **Matrix: Water**
Date Received: 05/19/15 16:15

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/27/15 16:04*	*20*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/27/15 16:04*	*20*
Toluene-d8 (Surr)	*95*		*71 - 126*		*05/27/15 16:04*	*20*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*05/27/15 16:04*	*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			05/22/15 12:18	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 12:18	1
Methane	**32**		4.0	1.0	ug/L			05/22/15 12:18	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**6900**		1000	1000	ug/L			05/28/15 12:16	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.055**		0.050	0.019	mg/L		05/20/15 08:18	05/20/15 18:38	1
Magnesium	**71.0**		0.20	0.043	mg/L		05/20/15 08:18	05/20/15 18:38	1
Manganese	**0.10**	**B**	0.0030	0.00040	mg/L		05/20/15 08:18	05/20/15 18:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1940**		50.0	28.2	mg/L			05/20/15 21:04	100
Sulfate	**210**		200	34.9	mg/L			05/20/15 21:04	100
Ammonia	**0.38**		0.020	0.0090	mg/L			05/21/15 11:34	1
Nitrate	**0.034**	**J**	0.050	0.020	mg/L			05/19/15 20:43	1
Nitrite	ND		0.050	0.020	mg/L			05/19/15 20:43	1
Total Organic Carbon	**1.9**	**B**	1.0	0.43	mg/L			05/23/15 05:47	1
Total Alkalinity	**348**	**B**	5.0	0.79	mg/L			05/19/15 16:30	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: MW-7-8-051915 — Lab Sample ID: 480-80629-3

Date Collected: 05/19/15 14:50 — **Matrix: Water**
Date Received: 05/19/15 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**140**		4.0	1.4	ug/L			05/27/15 16:27	4
trans-1,2-Dichloroethene	**3.8**	**J**	4.0	3.6	ug/L			05/27/15 16:27	4
Trichloroethene	**43**		4.0	1.8	ug/L			05/27/15 16:27	4
Vinyl chloride	**32**		4.0	3.6	ug/L			05/27/15 16:27	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/27/15 16:27*	*4*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/27/15 16:27*	*4*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/27/15 16:27*	*4*
Dibromofluoromethane (Surr)	*97*		*60 - 140*		*05/27/15 16:27*	*4*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**790**		20	16	ug/L			05/28/15 02:52	20

Client Sample ID: MW-7-8-051915 — Lab Sample ID: 480-80629-3

Date Collected: 05/19/15 14:50 — **Matrix: Water**
Date Received: 05/19/15 16:15

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*		*05/28/15 02:52*	*20*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/28/15 02:52*	*20*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/28/15 02:52*	*20*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/28/15 02:52*	*20*

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			05/22/15 13:44	1
Ethene	**1.6**	**J**	7.0	1.5	ug/L			05/22/15 13:44	1
Methane	**46**		4.0	1.0	ug/L			05/22/15 13:44	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**6400**		1000	1000	ug/L			05/28/15 12:28	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**18.5**		0.050	0.019	mg/L		05/20/15 08:18	05/20/15 18:41	1
Magnesium	**230**		0.20	0.043	mg/L		05/20/15 08:18	05/20/15 18:41	1
Manganese	**0.45**	**B**	0.0030	0.00040	mg/L		05/20/15 08:18	05/20/15 18:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3550**		50.0	28.2	mg/L			05/20/15 21:19	100
Sulfate	**270**		200	34.9	mg/L			05/20/15 21:19	100
Ammonia	**0.12**		0.020	0.0090	mg/L			05/21/15 11:34	1
Nitrate	ND		0.050	0.020	mg/L			05/19/15 20:44	1
Nitrite	ND		0.050	0.020	mg/L			05/19/15 20:44	1
Total Organic Carbon	**1.5**	**B**	1.0	0.43	mg/L			05/23/15 06:15	1
Total Alkalinity	**84.0**	**B**	5.0	0.79	mg/L			05/19/15 16:30	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80629-4

Date Collected: 05/19/15 00:00 — **Matrix: Water**
Date Received: 05/19/15 16:15

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			05/27/15 16:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/27/15 16:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/27/15 16:49	1
Trichloroethene	ND		1.0	0.46	ug/L			05/27/15 16:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/27/15 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/27/15 16:49*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/27/15 16:49*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/27/15 16:49*	*1*
Dibromofluoromethane (Surr)	*97*		*60 - 140*		*05/27/15 16:49*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80629-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80629-1	MW-7-7-051915	99	96	96	93
480-80629-2	MW-10-2-051915	100	97	95	99
480-80629-3	MW-7-8-051915	101	98	97	97
480-80629-3 - DL	MW-7-8-051915	97	96	97	95
480-80629-4	TRIP BLANK	104	98	99	97
LCS 480-244644/5	Lab Control Sample	99	99	99	100
LCS 480-244793/5	Lab Control Sample	95	97	98	96
MB 480-244644/7	Method Blank	103	98	96	94
MB 480-244793/7	Method Blank	99	98	97	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-244644/7
Matrix: Water
Analysis Batch: 244644

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			05/27/15 12:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/27/15 12:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/27/15 12:30	1
Trichloroethene	ND		1.0	0.46	ug/L			05/27/15 12:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/27/15 12:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/27/15 12:30*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/27/15 12:30*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/27/15 12:30*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*05/27/15 12:30*	*1*

Lab Sample ID: LCS 480-244644/5
Matrix: Water
Analysis Batch: 244644

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	24.3		ug/L		97	74 - 124
Tetrachloroethene	25.0	25.0		ug/L		100	74 - 122
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	73 - 127
Trichloroethene	25.0	23.4		ug/L		94	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*99*		*71 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Lab Sample ID: MB 480-244793/7
Matrix: Water
Analysis Batch: 244793

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			05/27/15 23:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/27/15 23:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/27/15 23:27	1
Trichloroethene	ND		1.0	0.46	ug/L			05/27/15 23:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/27/15 23:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/27/15 23:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/27/15 23:27*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/27/15 23:27*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*05/27/15 23:27*	*1*

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

Lab Sample ID: LCS 480-244793/5
Matrix: Water
Analysis Batch: 244793

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	24.1		ug/L		96	74 - 124
Tetrachloroethene	25.0	25.7		ug/L		103	74 - 122
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	73 - 127
Trichloroethene	25.0	24.2		ug/L		97	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*66 - 137*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*
Toluene-d8 (Surr)	*98*		*71 - 126*
Dibromofluoromethane (Surr)	*96*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-244094/3
Matrix: Water
Analysis Batch: 244094

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			05/22/15 09:58	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 09:58	1
Methane	ND		4.0	1.0	ug/L			05/22/15 09:58	1

Lab Sample ID: LCS 480-244094/4
Matrix: Water
Analysis Batch: 244094

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	14.8		ug/L		101	79 - 120
Ethene	13.6	13.0		ug/L		96	78 - 115
Methane	7.77	7.78		ug/L		100	71 - 118

Lab Sample ID: LCSD 480-244094/5
Matrix: Water
Analysis Batch: 244094

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	14.6		ug/L		101	79 - 120	1	50
Ethene	13.6	12.8		ug/L		94	78 - 115	1	50
Methane	7.77	7.75		ug/L		100	71 - 118	0	50

Lab Sample ID: MB 200-88868/3
Matrix: Water
Analysis Batch: 88868

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			05/28/15 11:50	1

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

Lab Sample ID: LCS 200-88868/2
Matrix: Water
Analysis Batch: 88868

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	5130		ug/L		102	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-243514/1-A
Matrix: Water
Analysis Batch: 243793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 243514

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/20/15 08:18	05/20/15 17:34	1
Magnesium	ND		0.20	0.043	mg/L		05/20/15 08:18	05/20/15 17:34	1
Manganese	0.000700	J	0.0030	0.00040	mg/L		05/20/15 08:18	05/20/15 17:34	1

Lab Sample ID: LCS 480-243514/2-A
Matrix: Water
Analysis Batch: 243793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243514

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.83		mg/L		98	80 - 120
Magnesium	10.0	10.22		mg/L		102	80 - 120
Manganese	0.200	0.203		mg/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-243605/21
Matrix: Water
Analysis Batch: 243605

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			05/20/15 17:39	1
Sulfate	ND		2.0	0.35	mg/L			05/20/15 17:39	1

Lab Sample ID: MB 480-243605/4
Matrix: Water
Analysis Batch: 243605

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			05/20/15 11:52	1
Sulfate	ND		2.0	0.35	mg/L			05/20/15 11:52	1

Lab Sample ID: LCS 480-243605/20
Matrix: Water
Analysis Batch: 243605

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	19.73		mg/L		99	83 - 121
Sulfate	20.0	19.16		mg/L		96	80 - 129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-243605/3
Matrix: Water
Analysis Batch: 243605

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	19.23		mg/L		96	83 - 121
Sulfate	20.0	18.50		mg/L		93	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-243905/27
Matrix: Water
Analysis Batch: 243905

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			05/21/15 11:09	1

Lab Sample ID: MB 480-243905/51
Matrix: Water
Analysis Batch: 243905

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			05/21/15 11:30	1

Lab Sample ID: LCS 480-243905/28
Matrix: Water
Analysis Batch: 243905

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	0.994		mg/L		99	90 - 110

Lab Sample ID: LCS 480-243905/52
Matrix: Water
Analysis Batch: 243905

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	0.989		mg/L		99	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-243484/3
Matrix: Water
Analysis Batch: 243484

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			05/19/15 21:22	1

Lab Sample ID: LCS 480-243484/4
Matrix: Water
Analysis Batch: 243484

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	1.60		mg/L		107	90 - 110

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

Lab Sample ID: MB 480-244300/28
Matrix: Water
Analysis Batch: 244300

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	0.542	J	1.0	0.43	mg/L			05/23/15 02:13	1

Lab Sample ID: LCS 480-244300/29
Matrix: Water
Analysis Batch: 244300

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	60.25		mg/L		100	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243468/3
Matrix: Water
Analysis Batch: 243468

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			05/19/15 16:30	1

Lab Sample ID: LCS 480-243468/4
Matrix: Water
Analysis Batch: 243468

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	108.0		mg/L		108	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-244272/3
Matrix: Water
Analysis Batch: 244272

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			05/23/15 11:00	1

Lab Sample ID: LCS 480-244272/4
Matrix: Water
Analysis Batch: 244272

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	0.763		mg/L		102	90 - 110

QC Association Summary

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

TestAmerica Job ID: 480-80629-1

GC/MS VOA

Analysis Batch: 244644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	8260C	
480-80629-2	MW-10-2-051915	Total/NA	Water	8260C	
480-80629-3	MW-7-8-051915	Total/NA	Water	8260C	
480-80629-4	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-244644/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-244644/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 244793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-3 - DL	MW-7-8-051915	Total/NA	Water	8260C	
LCS 480-244793/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-244793/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	RSK-175	
480-80629-2	MW-10-2-051915	Total/NA	Water	RSK-175	
480-80629-3	MW-7-8-051915	Total/NA	Water	RSK-175	
LCS 200-88868/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88868/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	RSK-175	
480-80629-2	MW-10-2-051915	Total/NA	Water	RSK-175	
480-80629-3	MW-7-8-051915	Total/NA	Water	RSK-175	
LCS 480-244094/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244094/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244094/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 243514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	3005A	
480-80629-2	MW-10-2-051915	Total/NA	Water	3005A	
480-80629-3	MW-7-8-051915	Total/NA	Water	3005A	
LCS 480-243514/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-243514/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 243793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	6010C	243514
480-80629-2	MW-10-2-051915	Total/NA	Water	6010C	243514
480-80629-3	MW-7-8-051915	Total/NA	Water	6010C	243514
LCS 480-243514/2-A	Lab Control Sample	Total/NA	Water	6010C	243514
MB 480-243514/1-A	Method Blank	Total/NA	Water	6010C	243514

General Chemistry

Analysis Batch: 243468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	SM 2320B	
480-80629-2	MW-10-2-051915	Total/NA	Water	SM 2320B	
480-80629-3	MW-7-8-051915	Total/NA	Water	SM 2320B	
LCS 480-243468/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243468/3	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	353.2	
LCS 480-243484/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-243484/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 243496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	353.2	
480-80629-2	MW-10-2-051915	Total/NA	Water	353.2	
480-80629-3	MW-7-8-051915	Total/NA	Water	353.2	

Analysis Batch: 243497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-2	MW-10-2-051915	Total/NA	Water	353.2	
480-80629-3	MW-7-8-051915	Total/NA	Water	353.2	

Analysis Batch: 243605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	300.0	
480-80629-2	MW-10-2-051915	Total/NA	Water	300.0	
480-80629-3	MW-7-8-051915	Total/NA	Water	300.0	
LCS 480-243605/20	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-243605/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-243605/21	Method Blank	Total/NA	Water	300.0	
MB 480-243605/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 243905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	350.1	
480-80629-2	MW-10-2-051915	Total/NA	Water	350.1	
480-80629-3	MW-7-8-051915	Total/NA	Water	350.1	
LCS 480-243905/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-243905/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-243905/27	Method Blank	Total/NA	Water	350.1	
MB 480-243905/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 244272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	SM 4500 S2 D	
480-80629-2	MW-10-2-051915	Total/NA	Water	SM 4500 S2 D	
480-80629-3	MW-7-8-051915	Total/NA	Water	SM 4500 S2 D	
LCS 480-244272/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-244272/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

General Chemistry (Continued)

Analysis Batch: 244300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80629-1	MW-7-7-051915	Total/NA	Water	9060A	
480-80629-2	MW-10-2-051915	Total/NA	Water	9060A	
480-80629-3	MW-7-8-051915	Total/NA	Water	9060A	
LCS 480-244300/29	Lab Control Sample	Total/NA	Water	9060A	
MB 480-244300/28	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-80629-1

Client Sample ID: MW-7-7-051915

Lab Sample ID: 480-80629-1

Date Collected: 05/19/15 11:20

Matrix: Water

Date Received: 05/19/15 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1000	244644	05/27/15 15:41	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88868	05/28/15 12:03	NEA	TAL BUR
Total/NA	Analysis	RSK-175		10	244094	05/22/15 12:00	JMO	TAL BUF
Total/NA	Prep	3005A			243514	05/20/15 08:18	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243793	05/20/15 18:35	AMH	TAL BUF
Total/NA	Analysis	300.0		100	243605	05/20/15 20:49	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243905	05/21/15 11:33	STD	TAL BUF
Total/NA	Analysis	353.2		1	243496	05/19/15 21:31	CLT	TAL BUF
Total/NA	Analysis	353.2		1	243484	05/19/15 21:31	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244300	05/23/15 05:19	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243468	05/19/15 16:30	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		5	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: MW-10-2-051915

Lab Sample ID: 480-80629-2

Date Collected: 05/19/15 14:20

Matrix: Water

Date Received: 05/19/15 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	244644	05/27/15 16:04	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88868	05/28/15 12:16	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244094	05/22/15 12:18	JMO	TAL BUF
Total/NA	Prep	3005A			243514	05/20/15 08:18	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243793	05/20/15 18:38	AMH	TAL BUF
Total/NA	Analysis	300.0		100	243605	05/20/15 21:04	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243905	05/21/15 11:34	STD	TAL BUF
Total/NA	Analysis	353.2		1	243496	05/19/15 20:43	CLT	TAL BUF
Total/NA	Analysis	353.2		1	243497	05/19/15 20:43	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244300	05/23/15 05:47	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243468	05/19/15 16:30	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: MW-7-8-051915

Lab Sample ID: 480-80629-3

Date Collected: 05/19/15 14:50

Matrix: Water

Date Received: 05/19/15 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	244644	05/27/15 16:27	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	20	244793	05/28/15 02:52	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	88868	05/28/15 12:28	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244094	05/22/15 13:44	JMO	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-80629-1

Client Sample ID: MW-7-8-051915

Date Collected: 05/19/15 14:50
Date Received: 05/19/15 16:15

Lab Sample ID: 480-80629-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			243514	05/20/15 08:18	TAS	TAL BUF
Total/NA	Analysis	6010C		1	243793	05/20/15 18:41	AMH	TAL BUF
Total/NA	Analysis	300.0		100	243605	05/20/15 21:19	CAS	TAL BUF
Total/NA	Analysis	350.1		1	243905	05/21/15 11:34	STD	TAL BUF
Total/NA	Analysis	353.2		1	243496	05/19/15 20:44	CLT	TAL BUF
Total/NA	Analysis	353.2		1	243497	05/19/15 20:44	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244300	05/23/15 06:15	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243468	05/19/15 16:30	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/19/15 00:00
Date Received: 05/19/15 16:15

Lab Sample ID: 480-80629-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	244644	05/27/15 16:49	NMD1	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: 480-80629-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80629-1

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: 480-80629-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80629-1	MW-7-7-051915	Water	05/19/15 11:20	05/19/15 16:15
480-80629-2	MW-10-2-051915	Water	05/19/15 14:20	05/19/15 16:15
480-80629-3	MW-7-8-051915	Water	05/19/15 14:50	05/19/15 16:15
480-80629-4	TRIP BLANK	Water	05/19/15 00:00	05/19/15 16:15

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. Wulf	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone: 716-844-7050	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	S	D	A	A	A	CB	N	N	N	X	
MW-7-7-051915	5/19/15	1120	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
MW-10-2-051915	5/19/15	1420	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
MW-7-8-051915	5/19/15	1450	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/19/15			Water	N	N				X								
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80629 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Daniel E. Wulf	5/19/15 16:15			5/19/15 1615	TA Buff
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: #1 5.0

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24220.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80629-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 6/1/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

480-80629 COC

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7-7-051915 (480-80629-1)	5/19/15	11:20 Eastern		Water			X	3	
MW-10-2-051915 (480-80629-2)	5/19/15	14:20 Eastern		Water			X	3	
MW-7-8-051915 (480-80629-3)	5/19/15	14:50 Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Cameron Williams	5-20-15 1700	TAB		5/21/15 1020	TA BTV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/29/2015

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 20MAY15
ACTWGT: 18.2 LB
CAD: 846654/CAFE2807
DIMS: 19x15x10 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

TRK# 0201 5657 0118 4506

THU - 21 MAY AA
STANDARD OVERNIGHT

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80629-1

Login Number: 80629
List Number: 1
Creator: Janish, Carl 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.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80629-1

Login Number: 80629
List Number: 2
Creator: Nye, Elizabeth A

List Source: TestAmerica Burlington
List Creation: 05/21/15 01:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455416
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	3.4º C
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.	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: 480-80736-1
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:
6/2/2015 5:25:58 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80736-1

Qualifiers

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.
¤	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: 480-80736-1

Job ID: 480-80736-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80736-1

Receipt
The samples were received on 5/20/2015 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2º C.

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

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-10-3-052015 (480-80736-1), TK-6-052015 (480-80736-2) and (480-80736-G-2 MS). The sample was analyzed at a dilution based on screening results.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-10-3-052015 (480-80736-1), TK-6-052015 (480-80736-2), (480-80457-A-4) and (480-80457-A-4 MS). 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: 480-80736-1

Client Sample ID: MW-10-3-052015 — Lab Sample ID: 480-80736-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	10		1.0	0.81	ug/L	1		8260C	Total/NA
Tetrachloroethene	13		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	7.2		1.0	0.46	ug/L	1		8260C	Total/NA
Magnesium	31.1		0.20	0.043	mg/L	1		6010C	Total/NA
Chloride	341		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	203		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
Nitrite	0.025	J B	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.9	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	138	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	1400		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TK-6-052015 — Lab Sample ID: 480-80736-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	32.7		0.20	0.043	mg/L	1		6010C	Total/NA
Chloride	765		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	247		10.0	1.7	mg/L	5		300.0	Total/NA
Nitrate	0.86		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.4	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	346	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	6200		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80736-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-10-3-052015 — Lab Sample ID: 480-80736-1

Date Collected: 05/20/15 11:00 — **Matrix: Water**
Date Received: 05/20/15 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**10**		1.0	0.81	ug/L			05/29/15 18:12	1
Tetrachloroethene	**13**		1.0	0.36	ug/L			05/29/15 18:12	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 18:12	1
Trichloroethene	**7.2**		1.0	0.46	ug/L			05/29/15 18:12	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/29/15 18:12*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/29/15 18:12*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/29/15 18:12*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/29/15 18:12*	*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			05/22/15 11:25	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 11:25	1
Methane	ND		4.0	1.0	ug/L			05/22/15 11:25	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**1400**		1000	1000	ug/L			05/29/15 16:16	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/21/15 12:02	05/22/15 14:16	1
Magnesium	**31.1**		0.20	0.043	mg/L		05/21/15 12:02	05/22/15 14:16	1
Manganese	ND		0.0030	0.00040	mg/L		05/21/15 12:02	05/22/15 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**341**		10.0	5.6	mg/L			05/22/15 17:56	20
Sulfate	**203**		10.0	1.7	mg/L			05/27/15 12:40	5
Ammonia	ND		0.020	0.0090	mg/L			05/24/15 09:18	1
Nitrate	**1.7**		0.050	0.020	mg/L			05/20/15 22:33	1
Nitrite	**0.025**	**J B**	0.050	0.020	mg/L			05/20/15 22:33	1
Total Organic Carbon	**1.9**	**B**	1.0	0.43	mg/L			05/23/15 15:37	1
Total Alkalinity	**138**	**B**	5.0	0.79	mg/L			05/22/15 22:42	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: TK-6-052015 — Lab Sample ID: 480-80736-2

Date Collected: 05/20/15 14:30 — **Matrix: Water**
Date Received: 05/20/15 16:30

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			05/29/15 18:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 18:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 18:39	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 18:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 18:39	1

Client Sample ID: TK-6-052015 — Lab Sample ID: 480-80736-2

Date Collected: 05/20/15 14:30 — **Matrix: Water**
Date Received: 05/20/15 16:30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/29/15 18:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/29/15 18:39*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/29/15 18:39*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*05/29/15 18:39*	*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			05/22/15 11:43	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 11:43	1
Methane	ND		4.0	1.0	ug/L			05/22/15 11:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**6200**		1000	1000	ug/L			05/29/15 16:31	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/21/15 12:02	05/22/15 14:37	1
Magnesium	**32.7**		0.20	0.043	mg/L		05/21/15 12:02	05/22/15 14:37	1
Manganese	ND		0.0030	0.00040	mg/L		05/21/15 12:02	05/22/15 14:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**765**		25.0	14.1	mg/L			05/22/15 18:04	50
Sulfate	**247**		10.0	1.7	mg/L			05/27/15 12:55	5
Ammonia	ND		0.020	0.0090	mg/L			05/24/15 09:19	1
Nitrate	**0.86**		0.050	0.020	mg/L			05/20/15 22:35	1
Nitrite	ND		0.050	0.020	mg/L			05/20/15 22:35	1
Total Organic Carbon	**1.4**	**B**	1.0	0.43	mg/L			05/23/15 16:04	1
Total Alkalinity	**346**	**B**	5.0	0.79	mg/L			05/22/15 22:48	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80736-3

Date Collected: 05/20/15 00:00 — **Matrix: Water**
Date Received: 05/20/15 16:30

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			05/29/15 13:35	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 13:35	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 13:35	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 13:35	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/29/15 13:35*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/29/15 13:35*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/29/15 13:35*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/29/15 13:35*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80736-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80736-1	MW-10-3-052015	101	98	102	102
480-80736-2	TK-6-052015	102	98	103	104
480-80736-3	TRIP BLANK	100	99	103	102
LCS 480-245128/5	Lab Control Sample	99	102	102	102
MB 480-245128/7	Method Blank	99	100	104	102

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-245128/7
Matrix: Water
Analysis Batch: 245128

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			05/29/15 13:00	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 13:00	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 13:00	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 13:00	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/29/15 13:00*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/29/15 13:00*	*1*
Toluene-d8 (Surr)	*104*		*71 - 126*		*05/29/15 13:00*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/29/15 13:00*	*1*

Lab Sample ID: LCS 480-245128/5
Matrix: Water
Analysis Batch: 245128

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	26.6		ug/L		106	74 - 122
trans-1,2-Dichloroethene	25.0	25.2		ug/L		101	73 - 127
Trichloroethene	25.0	25.5		ug/L		102	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-244094/3
Matrix: Water
Analysis Batch: 244094

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			05/22/15 09:58	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 09:58	1
Methane	ND		4.0	1.0	ug/L			05/22/15 09:58	1

Lab Sample ID: LCS 480-244094/4
Matrix: Water
Analysis Batch: 244094

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	14.8		ug/L		101	79 - 120
Ethene	13.6	13.0		ug/L		96	78 - 115
Methane	7.77	7.78		ug/L		100	71 - 118

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

Lab Sample ID: LCSD 480-244094/5
Matrix: Water
Analysis Batch: 244094

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	14.6		ug/L		101	79 - 120	1	50
Ethene	13.6	12.8		ug/L		94	78 - 115	1	50
Methane	7.77	7.75		ug/L		100	71 - 118	0	50

Lab Sample ID: MB 200-88964/3
Matrix: Water
Analysis Batch: 88964

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			05/29/15 13:39	1

Lab Sample ID: LCS 200-88964/2
Matrix: Water
Analysis Batch: 88964

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 480-243846/1-A
Matrix: Water
Analysis Batch: 244364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 243846

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/21/15 12:02	05/22/15 14:11	1
Magnesium	ND		0.20	0.043	mg/L		05/21/15 12:02	05/22/15 14:11	1
Manganese	ND		0.0030	0.00040	mg/L		05/21/15 12:02	05/22/15 14:11	1

Lab Sample ID: LCS 480-243846/2-A
Matrix: Water
Analysis Batch: 244364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243846

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	8.98		mg/L		90	80 - 120
Magnesium	10.0	9.33		mg/L		93	80 - 120
Manganese	0.200	0.162		mg/L		81	80 - 120

Lab Sample ID: 480-80736-1 MS
Matrix: Water
Analysis Batch: 244364

Client Sample ID: MW-10-3-052015
Prep Type: Total/NA
Prep Batch: 243846

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		10.0	9.43		mg/L		94	75 - 125
Magnesium	31.1		10.0	42.11		mg/L		110	75 - 125
Manganese	ND		0.200	0.169		mg/L		85	75 - 125

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

Lab Sample ID: 480-80736-1 MSD — **Client Sample ID: MW-10-3-052015**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244364 — **Prep Batch: 243846**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	ND		10.0	8.78		mg/L		88	75 - 125	7	20
Magnesium	31.1		10.0	39.72		mg/L		86	75 - 125	6	20
Manganese	ND		0.200	0.157		mg/L		79	75 - 125	7	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-244122/42 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/22/15 17:24	1

Lab Sample ID: LCS 480-244122/41 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.42		mg/L		102	83 - 121

Lab Sample ID: 480-80736-2 MS — **Client Sample ID: TK-6-052015**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244122

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	765		1250	2059		mg/L		104	83 - 121

Lab Sample ID: MB 480-244605/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244605

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/27/15 09:59	1
Sulfate	ND		2.0	0.35	mg/L			05/27/15 09:59	1

Lab Sample ID: LCS 480-244605/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244605

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	21.03		mg/L		105	83 - 121
Sulfate	20.0	20.72		mg/L		104	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-244305/27
Matrix: Water
Analysis Batch: 244305

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			05/24/15 09:16	1

Lab Sample ID: MB 480-244305/3
Matrix: Water
Analysis Batch: 244305

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			05/24/15 08:55	1

Lab Sample ID: MB 480-244305/51
Matrix: Water
Analysis Batch: 244305

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			05/24/15 09:37	1

Lab Sample ID: MB 480-244305/99
Matrix: Water
Analysis Batch: 244305

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			05/24/15 10:19	1

Lab Sample ID: LCS 480-244305/100
Matrix: Water
Analysis Batch: 244305

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	0.997		mg/L		100	90 - 110

Lab Sample ID: LCS 480-244305/28
Matrix: Water
Analysis Batch: 244305

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		100	90 - 110

Lab Sample ID: LCS 480-244305/4
Matrix: Water
Analysis Batch: 244305

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 480-244305/52
Matrix: Water
Analysis Batch: 244305

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	0.998		mg/L		100	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-243745/27
Matrix: Water
Analysis Batch: 243745

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	0.0245	J	0.050	0.020	mg/L			05/20/15 22:27	1

Lab Sample ID: MB 480-243745/3
Matrix: Water
Analysis Batch: 243745

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	0.0210	J	0.050	0.020	mg/L			05/20/15 21:58	1

Lab Sample ID: LCS 480-243745/28
Matrix: Water
Analysis Batch: 243745

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 480-243745/4
Matrix: Water
Analysis Batch: 243745

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	1.65		mg/L		110	90 - 110

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

Lab Sample ID: MB 480-244300/52
Matrix: Water
Analysis Batch: 244300

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	0.588	J	1.0	0.43	mg/L			05/23/15 12:58	1

Lab Sample ID: LCS 480-244300/53
Matrix: Water
Analysis Batch: 244300

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	59.69		mg/L		99	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-244269/30
Matrix: Water
Analysis Batch: 244269

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.58	J	5.0	0.79	mg/L			05/22/15 21:54	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 480-244269/7
Matrix: Water
Analysis Batch: 244269

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			05/22/15 19:52	1

Lab Sample ID: LCS 480-244269/31
Matrix: Water
Analysis Batch: 244269

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	99.72		mg/L		100	90 - 110

Lab Sample ID: LCS 480-244269/8
Matrix: Water
Analysis Batch: 244269

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	95.98		mg/L		96	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-244272/3
Matrix: Water
Analysis Batch: 244272

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			05/23/15 11:00	1

Lab Sample ID: LCS 480-244272/4
Matrix: Water
Analysis Batch: 244272

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	0.763		mg/L		102	90 - 110

QC Association Summary

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

TestAmerica Job ID: 480-80736-1

GC/MS VOA

Analysis Batch: 245128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	8260C	
480-80736-2	TK-6-052015	Total/NA	Water	8260C	
480-80736-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-245128/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245128/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	RSK-175	
480-80736-2	TK-6-052015	Total/NA	Water	RSK-175	
LCS 200-88964/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88964/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	RSK-175	
480-80736-2	TK-6-052015	Total/NA	Water	RSK-175	
LCS 480-244094/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244094/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244094/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 243846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	3005A	
480-80736-1 MS	MW-10-3-052015	Total/NA	Water	3005A	
480-80736-1 MSD	MW-10-3-052015	Total/NA	Water	3005A	
480-80736-2	TK-6-052015	Total/NA	Water	3005A	
LCS 480-243846/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-243846/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 244364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	6010C	243846
480-80736-1 MS	MW-10-3-052015	Total/NA	Water	6010C	243846
480-80736-1 MSD	MW-10-3-052015	Total/NA	Water	6010C	243846
480-80736-2	TK-6-052015	Total/NA	Water	6010C	243846
LCS 480-243846/2-A	Lab Control Sample	Total/NA	Water	6010C	243846
MB 480-243846/1-A	Method Blank	Total/NA	Water	6010C	243846

General Chemistry

Analysis Batch: 243745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	353.2	
480-80736-2	TK-6-052015	Total/NA	Water	353.2	
LCS 480-243745/28	Lab Control Sample	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 243745 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-243745/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-243745/27	Method Blank	Total/NA	Water	353.2	
MB 480-243745/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 243754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	353.2	
480-80736-2	TK-6-052015	Total/NA	Water	353.2	

Analysis Batch: 244122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	300.0	
480-80736-2	TK-6-052015	Total/NA	Water	300.0	
480-80736-2 MS	TK-6-052015	Total/NA	Water	300.0	
LCS 480-244122/41	Lab Control Sample	Total/NA	Water	300.0	
MB 480-244122/42	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 244269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	SM 2320B	
480-80736-2	TK-6-052015	Total/NA	Water	SM 2320B	
LCS 480-244269/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-244269/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-244269/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-244269/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 244272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	SM 4500 S2 D	
480-80736-2	TK-6-052015	Total/NA	Water	SM 4500 S2 D	
LCS 480-244272/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-244272/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 244300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	9060A	
480-80736-2	TK-6-052015	Total/NA	Water	9060A	
LCS 480-244300/53	Lab Control Sample	Total/NA	Water	9060A	
MB 480-244300/52	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 244305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	350.1	
480-80736-2	TK-6-052015	Total/NA	Water	350.1	
LCS 480-244305/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244305/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244305/4	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244305/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-244305/27	Method Blank	Total/NA	Water	350.1	
MB 480-244305/3	Method Blank	Total/NA	Water	350.1	
MB 480-244305/51	Method Blank	Total/NA	Water	350.1	

General Chemistry (Continued)

Analysis Batch: 244305 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-244305/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 244605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80736-1	MW-10-3-052015	Total/NA	Water	300.0	
480-80736-2	TK-6-052015	Total/NA	Water	300.0	
LCS 480-244605/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-244605/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 480-80736-1

Client Sample ID: MW-10-3-052015

Date Collected: 05/20/15 11:00
Date Received: 05/20/15 16:30

Lab Sample ID: 480-80736-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245128	05/29/15 18:12	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88964	05/29/15 16:16	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244094	05/22/15 11:25	JMO	TAL BUF
Total/NA	Prep	3005A			243846	05/21/15 12:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244364	05/22/15 14:16	LMH	TAL BUF
Total/NA	Analysis	300.0		5	244605	05/27/15 12:40	CAS	TAL BUF
Total/NA	Analysis	300.0		20	244122	05/22/15 17:56	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244305	05/24/15 09:18	STD	TAL BUF
Total/NA	Analysis	353.2		1	243745	05/20/15 22:33	MRF	TAL BUF
Total/NA	Analysis	353.2		1	243754	05/20/15 22:33	MRF	TAL BUF
Total/NA	Analysis	9060A		1	244300	05/23/15 15:37	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	244269	05/22/15 22:42	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: TK-6-052015

Date Collected: 05/20/15 14:30
Date Received: 05/20/15 16:30

Lab Sample ID: 480-80736-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245128	05/29/15 18:39	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	88964	05/29/15 16:31	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244094	05/22/15 11:43	JMO	TAL BUF
Total/NA	Prep	3005A			243846	05/21/15 12:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244364	05/22/15 14:37	LMH	TAL BUF
Total/NA	Analysis	300.0		5	244605	05/27/15 12:55	CAS	TAL BUF
Total/NA	Analysis	300.0		50	244122	05/22/15 18:04	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244305	05/24/15 09:19	STD	TAL BUF
Total/NA	Analysis	353.2		1	243745	05/20/15 22:35	MRF	TAL BUF
Total/NA	Analysis	353.2		1	243754	05/20/15 22:35	MRF	TAL BUF
Total/NA	Analysis	9060A		1	244300	05/23/15 16:04	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	244269	05/22/15 22:48	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/20/15 00:00
Date Received: 05/20/15 16:30

Lab Sample ID: 480-80736-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245128	05/29/15 13:35	NMD1	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-80736-1

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: 480-80736-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80736-1

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: 480-80736-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80736-1	MW-10-3-052015	Water	05/20/15 11:00	05/20/15 16:30
480-80736-2	TK-6-052015	Water	05/20/15 14:30	05/20/15 16:30
480-80736-3	TRIP BLANK	Water	05/20/15 00:00	05/20/15 16:30

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. Wulf	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Buffalo	TAT Requested (days):			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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: NY, 14203				Other:
Phone: 716-844-7050	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)				Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N					
MW-10-3-052015	5/20/15	1100	G	Water	H	N	X	X	X	X	X	X	X	X	X	X					
TK-6-052015	5/20/15	1430	G	Water	H	N	X	X	X	X	X	X	X	X	X	X					
TRIP BLANK	5/20/15			Water	H	N				X											
				Water																	
				Water																	
				Water																	
				Water																	
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				Water																	
				Water																	
				Water																	

480-80736 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
D. Wulf	5/20/15 16:30		Marshall	5/20/15 1630	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.2 #1

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24243.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80736-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 6/2/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

480-80736 COC

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-10-3-052015 (480-80736-1)	5/20/15	11:00 Eastern		Water			X	3	
TK-6-052015 (480-80736-2)	5/20/15	14:30 Eastern		Water			X	3	

Possible Hazard Identification	**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cameron Wallace	5-20-15 1700	TAB		5/21/15 1020	TA BTV
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 20MAY15
ACTWGT: 18.2 LB
CAD: 846654/CAFE2807
DIMS: 19x15x10 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

THU - 21 MAY AA
STANDARD OVERNIGHT

TRK# 0201 5657 0118 4506

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80736-1

Login Number: 80736
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: 480-80736-1

Login Number: 80736
List Number: 2
Creator: Nye, Elizabeth A

List Source: TestAmerica Burlington
List Creation: 05/21/15 01:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455416
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	3.4° C
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.	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: 480-80813-1
Client Project/Site: 058507, GM-Lockport Groundwater Sampling

For:
Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

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Authorized for release by:
6/5/2015 5:04:13 PM
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Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80813-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

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
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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. TestAmerica Job ID: 480-80813-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Job ID: 480-80813-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80813-1

Receipt
The samples were received on 5/21/2015 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

Receipt Exceptions

The Chain-of-Custody (COC) incorrectly lists the following sample ID as MW-9-12: MW-9-12-052115 (480-80813-2). The sampler called to correct the sample ID on 05/27/15.

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

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-9-101-A-052115 (480-80813-1), MW-9-101-A-052115 (480-80813-1[MS]), MW-9-101-A-052115 (480-80813-1[MSD]) and MW-9-12-052115 (480-80813-2). The sample was analyzed at a dilution based on screening results.

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: 480-80813-1

Client Sample ID: MW-9-101-A-052115 — Lab Sample ID: 480-80813-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	113		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0014	J	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	2620		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	981		200	34.9	mg/L	100		300.0	Total/NA
Nitrate	3.9		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	3.5	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	182		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	4100		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-9-12-052115 — Lab Sample ID: 480-80813-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.028	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	30.8		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.17		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	908		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	64.0	J	100	17.5	mg/L	50		300.0	Total/NA
Nitrate	0.082		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.9	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	225		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	4900		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80813-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-9-101-A-052115 — Lab Sample ID: 480-80813-1

Date Collected: 05/21/15 09:45 — **Matrix: Water**
Date Received: 05/21/15 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	F2	1.0	0.81	ug/L			05/29/15 19:07	1
Tetrachloroethene	ND	F1	1.0	0.36	ug/L			05/29/15 19:07	1
trans-1,2-Dichloroethene	ND	F2	1.0	0.90	ug/L			05/29/15 19:07	1
Trichloroethene	ND	F2	1.0	0.46	ug/L			05/29/15 19:07	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/29/15 19:07*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/29/15 19:07*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/29/15 19:07*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*05/29/15 19:07*	*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			05/22/15 13:11	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 13:11	1
Methane	ND		4.0	1.0	ug/L			05/22/15 13:11	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**4100**		1000	1000	ug/L			06/03/15 16:29	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/22/15 11:01	05/23/15 11:53	1
Magnesium	**113**		0.20	0.043	mg/L		05/22/15 11:01	05/23/15 11:53	1
Manganese	**0.0014**	**J**	0.0030	0.00040	mg/L		05/22/15 11:01	05/23/15 11:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2620**		50.0	28.2	mg/L			05/27/15 09:26	100
Sulfate	**981**		200	34.9	mg/L			05/27/15 09:26	100
Ammonia	ND	F1	0.020	0.0090	mg/L			05/24/15 10:35	1
Nitrate	**3.9**		0.050	0.020	mg/L			05/22/15 19:42	1
Nitrite	ND		0.050	0.020	mg/L			05/22/15 19:42	1
Total Organic Carbon	**3.5**	**B**	1.0	0.43	mg/L			05/24/15 21:45	1
Total Alkalinity	**182**		5.0	0.79	mg/L			05/22/15 21:15	1
Sulfide	ND	F1	0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: MW-9-12-052115 — Lab Sample ID: 480-80813-2

Date Collected: 05/21/15 13:10 — **Matrix: Water**
Date Received: 05/21/15 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			05/30/15 01:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 01:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 01:27	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 01:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 01:27	1

Client Sample ID: MW-9-12-052115 — Lab Sample ID: 480-80813-2

Date Collected: 05/21/15 13:10 — **Matrix: Water**
Date Received: 05/21/15 16:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/30/15 01:27*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/30/15 01:27*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/30/15 01:27*	*1*
Dibromofluoromethane (Surr)	*100*		*60 - 140*		*05/30/15 01:27*	*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			05/22/15 13:28	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 13:28	1
Methane	ND		4.0	1.0	ug/L			05/22/15 13:28	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**4900**		1000	1000	ug/L			06/03/15 17:47	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.028**	**J**	0.050	0.019	mg/L		05/22/15 11:01	05/23/15 12:07	1
Magnesium	**30.8**		0.20	0.043	mg/L		05/22/15 11:01	05/23/15 12:07	1
Manganese	**0.17**		0.0030	0.00040	mg/L		05/22/15 11:01	05/23/15 12:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**908**		25.0	14.1	mg/L			05/27/15 10:15	50
Sulfate	**64.0**	**J**	100	17.5	mg/L			05/27/15 10:15	50
Ammonia	ND		0.020	0.0090	mg/L			05/24/15 10:37	1
Nitrate	**0.082**		0.050	0.020	mg/L			05/23/15 11:41	1
Nitrite	ND		0.050	0.020	mg/L			05/23/15 11:41	1
Total Organic Carbon	**1.9**	**B**	1.0	0.43	mg/L			05/24/15 23:08	1
Total Alkalinity	**225**		5.0	0.79	mg/L			05/22/15 21:33	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80813-3

Date Collected: 05/21/15 00:00 — **Matrix: Water**
Date Received: 05/21/15 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			05/29/15 14:02	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 14:02	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 14:02	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 14:02	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*05/29/15 14:02*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/29/15 14:02*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/29/15 14:02*	*1*
Dibromofluoromethane (Surr)	*100*		*60 - 140*		*05/29/15 14:02*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80813-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80813-1	MW-9-101-A-052115	101	98	102	101
480-80813-1 MS	MW-9-101-A-052115	98	102	102	101
480-80813-1 MSD	MW-9-101-A-052115	97	102	102	99
480-80813-2	MW-9-12-052115	100	99	102	100
480-80813-3	TRIP BLANK	98	99	102	100
LCS 480-245128/5	Lab Control Sample	99	102	102	102
LCS 480-245273/4	Lab Control Sample	99	101	102	101
MB 480-245128/7	Method Blank	99	100	104	102
MB 480-245273/6	Method Blank	100	99	101	102

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-245128/7
Matrix: Water
Analysis Batch: 245128

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			05/29/15 13:00	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 13:00	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 13:00	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 13:00	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/29/15 13:00*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/29/15 13:00*	*1*
Toluene-d8 (Surr)	*104*		*71 - 126*		*05/29/15 13:00*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/29/15 13:00*	*1*

Lab Sample ID: LCS 480-245128/5
Matrix: Water
Analysis Batch: 245128

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	26.6		ug/L		106	74 - 122
trans-1,2-Dichloroethene	25.0	25.2		ug/L		101	73 - 127
Trichloroethene	25.0	25.5		ug/L		102	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 245128

Client Sample ID: MW-9-101-A-052115
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	F2	25.0	29.3		ug/L		117	74 - 124
Tetrachloroethene	ND	F1	25.0	31.3	F1	ug/L		125	74 - 122
trans-1,2-Dichloroethene	ND	F2	25.0	29.6		ug/L		118	73 - 127
Trichloroethene	ND	F2	25.0	29.2		ug/L		117	74 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

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

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 245128

Client Sample ID: MW-9-101-A-052115
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	ND	F2	25.0	24.1	F2	ug/L		96	74 - 124	20	15
Tetrachloroethene	ND	F1	25.0	25.5		ug/L		102	74 - 122	20	20
trans-1,2-Dichloroethene	ND	F2	25.0	23.5	F2	ug/L		94	73 - 127	23	20
Trichloroethene	ND	F2	25.0	23.3	F2	ug/L		93	74 - 123	23	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*99*		*60 - 140*

Lab Sample ID: MB 480-245273/6
Matrix: Water
Analysis Batch: 245273

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			05/30/15 01:00	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 01:00	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 01:00	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 01:00	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 01:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/30/15 01:00*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/30/15 01:00*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/30/15 01:00*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/30/15 01:00*	*1*

Lab Sample ID: LCS 480-245273/4
Matrix: Water
Analysis Batch: 245273

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		105	74 - 124
Tetrachloroethene	25.0	27.4		ug/L		110	74 - 122
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	73 - 127
Trichloroethene	25.0	26.2		ug/L		105	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-244095/3
Matrix: Water
Analysis Batch: 244095

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			05/22/15 10:01	1
Ethene	ND		7.0	1.5	ug/L			05/22/15 10:01	1
Methane	ND		4.0	1.0	ug/L			05/22/15 10:01	1

Lab Sample ID: LCS 480-244095/4
Matrix: Water
Analysis Batch: 244095

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	14.4		ug/L		99	79 - 120
Ethene	13.6	13.0		ug/L		96	78 - 115
Methane	7.77	7.37		ug/L		95	71 - 118

Lab Sample ID: LCSD 480-244095/5
Matrix: Water
Analysis Batch: 244095

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	14.9		ug/L		102	79 - 120	3	50
Ethene	13.6	13.1		ug/L		97	78 - 115	1	50
Methane	7.77	7.76		ug/L		100	71 - 118	5	50

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 244095

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	ND		14.6	14.5		ug/L		99	76 - 125
Ethene	ND		13.6	13.0		ug/L		95	75 - 129
Methane	ND		7.77	7.84		ug/L		101	38 - 184

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 244095

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	ND		14.6	14.4		ug/L		99	76 - 125	1	50
Ethene	ND		13.6	12.9		ug/L		95	75 - 129	0	50
Methane	ND		7.77	7.80		ug/L		100	38 - 184	0	50

Lab Sample ID: MB 200-89182/25
Matrix: Water
Analysis Batch: 89182

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			06/03/15 17:21	1

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

Lab Sample ID: MB 200-89182/3
Matrix: Water
Analysis Batch: 89182

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			06/03/15 10:16	1

Lab Sample ID: LCS 200-89182/2
Matrix: Water
Analysis Batch: 89182

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	5530		ug/L		110	70 - 130

Lab Sample ID: LCS 200-89182/24
Matrix: Water
Analysis Batch: 89182

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	5620		ug/L		112	70 - 130

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 89182

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	4100		5010	9070		ug/L		99	70 - 130

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 89182

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon dioxide	4100		5010	9210		ug/L		102	70 - 130	2	30

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-244066/1-A
Matrix: Water
Analysis Batch: 244367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244066

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/22/15 11:01	05/23/15 11:11	1
Magnesium	ND		0.20	0.043	mg/L		05/22/15 11:01	05/23/15 11:11	1
Manganese	ND		0.0030	0.00040	mg/L		05/22/15 11:01	05/23/15 11:11	1

Lab Sample ID: LCS 480-244066/2-A
Matrix: Water
Analysis Batch: 244367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244066

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.21		mg/L		92	80 - 120
Magnesium	10.0	9.70		mg/L		97	80 - 120
Manganese	0.200	0.188		mg/L		94	80 - 120

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

Lab Sample ID: 480-80813-1 MS — **Client Sample ID: MW-9-101-A-052115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244367 — **Prep Batch: 244066**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		10.0	8.75		mg/L		88	75 - 125
Magnesium	113		10.0	119.6	4	mg/L		64	75 - 125
Manganese	0.0014	J	0.200	0.179		mg/L		89	75 - 125

Lab Sample ID: 480-80813-1 MSD — **Client Sample ID: MW-9-101-A-052115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244367 — **Prep Batch: 244066**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	ND		10.0	8.25		mg/L		83	75 - 125	6	20
Magnesium	113		10.0	113.1	4	mg/L		-2	75 - 125	6	20
Manganese	0.0014	J	0.200	0.170		mg/L		84	75 - 125	5	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-244495/66 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/27/15 08:35	1
Sulfate	ND		2.0	0.35	mg/L			05/27/15 08:35	1

Lab Sample ID: LCS 480-244495/65 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.62		mg/L		103	83 - 121
Sulfate	20.0	19.29		mg/L		96	80 - 129

Lab Sample ID: 480-80813-1 MS — **Client Sample ID: MW-9-101-A-052115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2620		2500	5077		mg/L		98	83 - 121
Sulfate	981		2500	3233		mg/L		90	80 - 129

Lab Sample ID: 480-80813-1 MSD — **Client Sample ID: MW-9-101-A-052115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244495

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2620		2500	4993		mg/L		95	83 - 121	2	20
Sulfate	981		2500	3162		mg/L		87	80 - 129	2	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-244305/75
Matrix: Water
Analysis Batch: 244305

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			05/24/15 09:58	1

Lab Sample ID: MB 480-244305/99
Matrix: Water
Analysis Batch: 244305

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			05/24/15 10:19	1

Lab Sample ID: LCS 480-244305/100
Matrix: Water
Analysis Batch: 244305

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	0.997		mg/L		100	90 - 110

Lab Sample ID: LCS 480-244305/76
Matrix: Water
Analysis Batch: 244305

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	0.997		mg/L		100	90 - 110

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 244305

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND	F1	0.200	0.176	F1	mg/L		88	90 - 110

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 244305

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	ND	F1	0.200	0.164	F1	mg/L		82	90 - 110	7	20

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-244231/27
Matrix: Water
Analysis Batch: 244231

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			05/22/15 20:09	1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: MB 480-244231/3
Matrix: Water
Analysis Batch: 244231

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			05/22/15 19:39	1

Lab Sample ID: LCS 480-244231/28
Matrix: Water
Analysis Batch: 244231

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	1.62		mg/L		108	90 - 110

Lab Sample ID: LCS 480-244231/4
Matrix: Water
Analysis Batch: 244231

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

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 244231

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	1.05		mg/L		105	90 - 110

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 244231

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite	ND		1.00	1.04		mg/L		104	90 - 110	1	20

Lab Sample ID: MB 480-244274/3
Matrix: Water
Analysis Batch: 244274

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			05/23/15 11:38	1

Lab Sample ID: LCS 480-244274/4
Matrix: Water
Analysis Batch: 244274

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

Lab Sample ID: 480-80813-2 MS
Matrix: Water
Analysis Batch: 244274

Client Sample ID: MW-9-12-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: 480-80813-2 DU **Client Sample ID: MW-9-12-052115**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244274

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite	ND		ND		mg/L		NC	20

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

Lab Sample ID: MB 480-244329/4 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.669	J	1.0	0.43	mg/L			05/24/15 13:39	1

Lab Sample ID: LCS 480-244329/5 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	60.20		mg/L		100	90 - 110

Lab Sample ID: 480-80813-1 MS **Client Sample ID: MW-9-101-A-052115**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244329

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	3.5	B	20.0	18.00		mg/L		72	54 - 131

Lab Sample ID: 480-80813-1 MSD **Client Sample ID: MW-9-101-A-052115**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244329

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	3.5	B	20.0	17.93		mg/L		72	54 - 131	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-244269/30 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244269

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.58	J	5.0	0.79	mg/L			05/22/15 21:54	1

Lab Sample ID: MB 480-244269/7 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 244269

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/22/15 19:52	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-244269/31
Matrix: Water
Analysis Batch: 244269

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	99.72		mg/L		100	90 - 110

Lab Sample ID: LCS 480-244269/8
Matrix: Water
Analysis Batch: 244269

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	95.98		mg/L		96	90 - 110

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 244269

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	182		100	253.8		mg/L		72	60 - 140

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 244269

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Alkalinity	182		100	259.8		mg/L		78	60 - 140	2	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-244272/3
Matrix: Water
Analysis Batch: 244272

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			05/23/15 11:00	1

Lab Sample ID: LCS 480-244272/4
Matrix: Water
Analysis Batch: 244272

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	0.763		mg/L		102	90 - 110

Lab Sample ID: 480-80813-1 MS
Matrix: Water
Analysis Batch: 244272

Client Sample ID: MW-9-101-A-052115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND	F1	0.500	0.416	F1	mg/L		83	90 - 110

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 480-80813-1 MSD
Matrix: Water
Analysis Batch: 244272

Client Sample ID: MW-9-101-A-052115
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	F1	0.500	0.423	F1	mg/L		85	90 - 110	2	20

QC Association Summary

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

TestAmerica Job ID: 480-80813-1

GC/MS VOA

Analysis Batch: 245128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	8260C	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	8260C	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	8260C	
480-80813-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-245128/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245128/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 245273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-2	MW-9-12-052115	Total/NA	Water	8260C	
LCS 480-245273/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245273/6	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 89182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	RSK-175	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	RSK-175	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	RSK-175	
480-80813-2	MW-9-12-052115	Total/NA	Water	RSK-175	
LCS 200-89182/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 200-89182/24	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-89182/25	Method Blank	Total/NA	Water	RSK-175	
MB 200-89182/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	RSK-175	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	RSK-175	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	RSK-175	
480-80813-2	MW-9-12-052115	Total/NA	Water	RSK-175	
LCS 480-244095/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244095/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244095/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 244066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	3005A	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	3005A	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	3005A	
480-80813-2	MW-9-12-052115	Total/NA	Water	3005A	
LCS 480-244066/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-244066/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 244367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	6010C	244066

Metals (Continued)

Analysis Batch: 244367 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	6010C	244066
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	6010C	244066
480-80813-2	MW-9-12-052115	Total/NA	Water	6010C	244066
LCS 480-244066/2-A	Lab Control Sample	Total/NA	Water	6010C	244066
MB 480-244066/1-A	Method Blank	Total/NA	Water	6010C	244066

General Chemistry

Analysis Batch: 244231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	353.2	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	353.2	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	353.2	
LCS 480-244231/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-244231/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-244231/27	Method Blank	Total/NA	Water	353.2	
MB 480-244231/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 244239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	353.2	

Analysis Batch: 244269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	SM 2320B	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	SM 2320B	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	SM 2320B	
480-80813-2	MW-9-12-052115	Total/NA	Water	SM 2320B	
LCS 480-244269/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-244269/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-244269/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-244269/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 244272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	SM 4500 S2 D	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	SM 4500 S2 D	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	SM 4500 S2 D	
480-80813-2	MW-9-12-052115	Total/NA	Water	SM 4500 S2 D	
LCS 480-244272/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-244272/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 244274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-2	MW-9-12-052115	Total/NA	Water	353.2	
480-80813-2 DU	MW-9-12-052115	Total/NA	Water	353.2	
480-80813-2 MS	MW-9-12-052115	Total/NA	Water	353.2	
LCS 480-244274/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-244274/3	Method Blank	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 244298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-2	MW-9-12-052115	Total/NA	Water	353.2	

Analysis Batch: 244305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	350.1	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	350.1	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	350.1	
480-80813-2	MW-9-12-052115	Total/NA	Water	350.1	
LCS 480-244305/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244305/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-244305/75	Method Blank	Total/NA	Water	350.1	
MB 480-244305/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 244329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	9060A	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	9060A	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	9060A	
480-80813-2	MW-9-12-052115	Total/NA	Water	9060A	
LCS 480-244329/5	Lab Control Sample	Total/NA	Water	9060A	
MB 480-244329/4	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 244495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80813-1	MW-9-101-A-052115	Total/NA	Water	300.0	
480-80813-1 MS	MW-9-101-A-052115	Total/NA	Water	300.0	
480-80813-1 MSD	MW-9-101-A-052115	Total/NA	Water	300.0	
480-80813-2	MW-9-12-052115	Total/NA	Water	300.0	
LCS 480-244495/65	Lab Control Sample	Total/NA	Water	300.0	
MB 480-244495/66	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 480-80813-1

Client Sample ID: MW-9-101-A-052115

Date Collected: 05/21/15 09:45
Date Received: 05/21/15 16:45

Lab Sample ID: 480-80813-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245128	05/29/15 19:07	NMD1	TAL BUF
Total/NA	Analysis	RSK-175		1	89182	06/03/15 16:29	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244095	05/22/15 13:11	JMO	TAL BUF
Total/NA	Prep	3005A			244066	05/22/15 11:01	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244367	05/23/15 11:53	SLB	TAL BUF
Total/NA	Analysis	300.0		100	244495	05/27/15 09:26	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244305	05/24/15 10:35	STD	TAL BUF
Total/NA	Analysis	353.2		1	244239	05/22/15 19:42	CLT	TAL BUF
Total/NA	Analysis	353.2		1	244231	05/22/15 19:42	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244329	05/24/15 21:45	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	244269	05/22/15 21:15	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: MW-9-12-052115

Date Collected: 05/21/15 13:10
Date Received: 05/21/15 16:45

Lab Sample ID: 480-80813-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245273	05/30/15 01:27	EDB	TAL BUF
Total/NA	Analysis	RSK-175		1	89182	06/03/15 17:47	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244095	05/22/15 13:28	JMO	TAL BUF
Total/NA	Prep	3005A			244066	05/22/15 11:01	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244367	05/23/15 12:07	SLB	TAL BUF
Total/NA	Analysis	300.0		50	244495	05/27/15 10:15	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244305	05/24/15 10:37	STD	TAL BUF
Total/NA	Analysis	353.2		1	244298	05/23/15 11:41	EGS	TAL BUF
Total/NA	Analysis	353.2		1	244274	05/23/15 11:41	EGS	TAL BUF
Total/NA	Analysis	9060A		1	244329	05/24/15 23:08	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	244269	05/22/15 21:33	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/21/15 00:00
Date Received: 05/21/15 16:45

Lab Sample ID: 480-80813-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245128	05/29/15 14:02	NMD1	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: 480-80813-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15 *
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80813-1

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: 480-80813-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80813-1	MW-9-101-A-052115	Water	05/21/15 09:45	05/21/15 16:45
480-80813-2	MW-9-12-052115	Water	05/21/15 13:10	05/21/15 16:45
480-80813-3	TRIP BLANK	Water	05/21/15 00:00	05/21/15 16:45

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

Chain of Custody Record

TestAmerica

480-80813 Chain of Custody

Client Information	Sampler: D. Wolf	Lab PM: Deyo, Melissa L	Carrier Tracking #
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com	
Company: GZA GeoEnvironmental, Inc.			
Address: 535 Washington Street 11th Floor	Due Date Requested:		
City: Buffalo	TAT Requested (days):		
State, Zip: NY, 14203			
Phone: 716-844-7050	PO #: 4065906		
Email: thomas.bohlen@gza.com	WO #: 058507		
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014		
Site:	SSOW#:		

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	S	D	A	A	A	CB	N	N	N		
MW-9-101-A ~~-104~~-052115	5/21/15	0945	G	Water	Y	Y	X	X	X	X	X	X	X	X	X	X		MS/MSD
MW-9-12	5/21/15	1310	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK				Water	N	N				X								
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

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
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Dan E. Wolf	5/21/15 16:45		Ann Kolb	05/21/15 1645	TA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.0 #1

6/5/2015

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80813-1

Login Number: 80813
List Number: 1
Creator: Janish, Carl 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.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80813-1

Login Number: 80813
List Number: 2
Creator: Goodrich, Kenneth L

List Source: TestAmerica Burlington
List Creation: 05/23/15 03:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455422,423
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	1.8, 3.4ºC
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.	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: 480-80899-1
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:
6/8/2015 5:57:10 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80899-1

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.

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
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
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: 480-80899-1

Job ID: 480-80899-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80899-1

Receipt
The samples were received on 5/22/2015 3:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-8-2-052215 (480-80899-3). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-8-1-052215 (480-80899-1), MW-8-3-052215 (480-80899-2), MW-8-2-052215 (480-80899-3) and (480-80899-G-3 MS). The sample was analyzed at a dilution based on screening results.

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-8-1-052215 (480-80899-1). 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: 480-80899-1

Client Sample ID: MW-8-1-052215 — Lab Sample ID: 480-80899-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane	41	J	75	15	ug/L	10		RSK-175	Total/NA
Ethene	45	J	70	15	ug/L	10		RSK-175	Total/NA
Methane	370		40	10	ug/L	10		RSK-175	Total/NA
Iron	0.040	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		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	531		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	1.2		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.3	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	288	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	2.6		0.50	0.26	mg/L	5		SM 4500 S2 D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	13000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-8-3-052215 — Lab Sample ID: 480-80899-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.8		1.0	0.81	ug/L	1		8260C	Total/NA
Methane	23		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	61.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	4.1		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1930		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	27.8	J	100	17.5	mg/L	50		300.0	Total/NA
Ammonia	1.8		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.14		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	7.7	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	318	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	8500		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-8-2-052215 — Lab Sample ID: 480-80899-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1600		25	20	ug/L	25		8260C	Total/NA
Tetrachloroethene	10	J	25	9.0	ug/L	25		8260C	Total/NA
Trichloroethene	24	J	25	12	ug/L	25		8260C	Total/NA
Methane	2.7	J	4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.065		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	36.9		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0046		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	361		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	177		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.092		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.46		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.052		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.0	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	345	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 480-80899-1

Client Sample ID: MW-8-2-052215 (Continued)

Lab Sample ID: 480-80899-3

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	3700		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-80899-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-8-1-052215 — Lab Sample ID: 480-80899-1

Date Collected: 05/22/15 10:50 — **Matrix: Water**
Date Received: 05/22/15 15:40

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			05/30/15 02:10	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 02:10	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 02:10	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 02:10	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/30/15 02:10*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/30/15 02:10*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/30/15 02:10*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/30/15 02:10*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**41**	**J**	75	15	ug/L			05/26/15 11:41	10
Ethene	**45**	**J**	70	15	ug/L			05/26/15 11:41	10
Methane	**370**		40	10	ug/L			05/26/15 11:41	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**13000**		1000	1000	ug/L			06/04/15 11:56	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.040**	**J**	0.050	0.019	mg/L		05/26/15 07:50	05/26/15 20:11	1
Magnesium	**102**		0.20	0.043	mg/L		05/26/15 07:50	05/26/15 20:11	1
Manganese	**0.12**		0.0030	0.00040	mg/L		05/26/15 07:50	05/26/15 20:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1430**		25.0	14.1	mg/L			05/27/15 12:25	50
Sulfate	**531**		100	17.5	mg/L			05/27/15 12:25	50
Ammonia	**1.2**		0.020	0.0090	mg/L			05/26/15 13:20	1
Nitrate	ND		0.050	0.020	mg/L			05/22/15 21:21	1
Nitrite	ND		0.050	0.020	mg/L			05/22/15 21:21	1
Total Organic Carbon	**1.3**	**B**	1.0	0.43	mg/L			05/28/15 01:03	1
Total Alkalinity	**288**	**B**	5.0	0.79	mg/L			05/27/15 16:02	1
Sulfide	**2.6**		0.50	0.26	mg/L			05/23/15 11:00	5

Client Sample ID: MW-8-3-052215 — Lab Sample ID: 480-80899-2

Date Collected: 05/22/15 11:10 — **Matrix: Water**
Date Received: 05/22/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.8**		1.0	0.81	ug/L			05/30/15 02:33	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 02:33	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 02:33	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 02:33	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 02:33	1

Client Sample ID: MW-8-3-052215 — Lab Sample ID: 480-80899-2

Date Collected: 05/22/15 11:10 — **Matrix: Water**
Date Received: 05/22/15 15:40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*		*05/30/15 02:33*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/30/15 02:33*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/30/15 02:33*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*05/30/15 02:33*	*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			05/26/15 11:59	1
Ethene	ND		7.0	1.5	ug/L			05/26/15 11:59	1
Methane	**23**		4.0	1.0	ug/L			05/26/15 11:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**8500**		1000	1000	ug/L			06/04/15 12:13	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		05/26/15 07:50	05/26/15 20:14	1
Magnesium	**61.0**		0.20	0.043	mg/L		05/26/15 07:50	05/26/15 20:14	1
Manganese	**4.1**		0.0030	0.00040	mg/L		05/26/15 07:50	05/26/15 20:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1930**		25.0	14.1	mg/L			05/27/15 12:33	50
Sulfate	**27.8**	**J**	100	17.5	mg/L			05/27/15 12:33	50
Ammonia	**1.8**		0.020	0.0090	mg/L			05/26/15 12:30	1
Nitrate	**0.14**		0.050	0.020	mg/L			05/22/15 21:49	1
Nitrite	ND		0.050	0.020	mg/L			05/22/15 21:49	1
Total Organic Carbon	**7.7**	**B**	1.0	0.43	mg/L			05/28/15 01:31	1
Total Alkalinity	**318**	**B**	5.0	0.79	mg/L			05/27/15 16:08	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: MW-8-2-052215 — Lab Sample ID: 480-80899-3

Date Collected: 05/22/15 15:00 — **Matrix: Water**
Date Received: 05/22/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1600**		25	20	ug/L			05/30/15 13:44	25
Tetrachloroethene	**10**	**J**	25	9.0	ug/L			05/30/15 13:44	25
trans-1,2-Dichloroethene	ND		25	23	ug/L			05/30/15 13:44	25
Trichloroethene	**24**	**J**	25	12	ug/L			05/30/15 13:44	25
Vinyl chloride	ND		25	23	ug/L			05/30/15 13:44	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/30/15 13:44*	*25*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/30/15 13:44*	*25*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/30/15 13:44*	*25*
Dibromofluoromethane (Surr)	*100*		*60 - 140*		*05/30/15 13:44*	*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			05/26/15 12:16	1

Client Sample ID: MW-8-2-052215 — Lab Sample ID: 480-80899-3

Date Collected: 05/22/15 15:00 — **Matrix: Water**
Date Received: 05/22/15 15:40

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			05/26/15 12:16	1
Methane	**2.7**	**J**	4.0	1.0	ug/L			05/26/15 12:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**3700**		1000	1000	ug/L			06/04/15 12:23	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.065**		0.050	0.019	mg/L		05/26/15 07:50	05/26/15 20:18	1
Magnesium	**36.9**		0.20	0.043	mg/L		05/26/15 07:50	05/26/15 20:18	1
Manganese	**0.0046**		0.0030	0.00040	mg/L		05/26/15 07:50	05/26/15 20:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**361**		10.0	5.6	mg/L			05/27/15 12:41	20
Sulfate	**177**		40.0	7.0	mg/L			05/27/15 12:41	20
Ammonia	**0.092**		0.020	0.0090	mg/L			05/26/15 12:31	1
Nitrate	**0.46**		0.050	0.020	mg/L			05/22/15 21:50	1
Nitrite	**0.052**		0.050	0.020	mg/L			05/22/15 21:50	1
Total Organic Carbon	**2.0**	**B**	1.0	0.43	mg/L			05/28/15 01:58	1
Total Alkalinity	**345**	**B**	5.0	0.79	mg/L			05/27/15 16:16	1
Sulfide	ND		0.10	0.052	mg/L			05/23/15 11:00	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80899-4

Date Collected: 05/22/15 00:00 — **Matrix: Water**
Date Received: 05/22/15 15:40

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			05/30/15 00:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 00:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 00:15	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 00:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*05/30/15 00:15*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/30/15 00:15*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/30/15 00:15*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*05/30/15 00:15*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80899-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80899-1	MW-8-1-052215	102	99	96	95
480-80899-2	MW-8-3-052215	97	96	98	93
480-80899-3	MW-8-2-052215	105	102	98	100
480-80899-4	TRIP BLANK	98	98	96	93
LCS 480-245266/4	Lab Control Sample	99	103	102	100
LCS 480-245306/5	Lab Control Sample	100	104	101	101
MB 480-245266/6	Method Blank	102	98	97	95
MB 480-245306/7	Method Blank	105	102	99	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-245266/6
Matrix: Water
Analysis Batch: 245266

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			05/29/15 22:56	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 22:56	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 22:56	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 22:56	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 22:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/29/15 22:56*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/29/15 22:56*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/29/15 22:56*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/29/15 22:56*	*1*

Lab Sample ID: LCS 480-245266/4
Matrix: Water
Analysis Batch: 245266

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	25.6		ug/L		102	74 - 124
Tetrachloroethene	25.0	26.8		ug/L		107	74 - 122
trans-1,2-Dichloroethene	25.0	26.4		ug/L		105	73 - 127
Trichloroethene	25.0	25.8		ug/L		103	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Lab Sample ID: MB 480-245306/7
Matrix: Water
Analysis Batch: 245306

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			05/30/15 13:06	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 13:06	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 13:06	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 13:06	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 13:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/30/15 13:06*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/30/15 13:06*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/30/15 13:06*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/30/15 13:06*	*1*

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

Lab Sample ID: LCS 480-245306/5
Matrix: Water
Analysis Batch: 245306

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	25.2		ug/L		101	74 - 124
Tetrachloroethene	25.0	25.2		ug/L		101	74 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	24.5		ug/L		98	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-244451/3
Matrix: Water
Analysis Batch: 244451

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			05/26/15 10:49	1
Ethene	ND		7.0	1.5	ug/L			05/26/15 10:49	1
Methane	ND		4.0	1.0	ug/L			05/26/15 10:49	1

Lab Sample ID: LCS 480-244451/4
Matrix: Water
Analysis Batch: 244451

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	79 - 120
Ethene	13.6	13.0		ug/L		96	78 - 115
Methane	7.77	7.96		ug/L		102	71 - 118

Lab Sample ID: LCSD 480-244451/5
Matrix: Water
Analysis Batch: 244451

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	14.3		ug/L		98	79 - 120	1	50
Ethene	13.6	12.9		ug/L		95	78 - 115	1	50
Methane	7.77	7.92		ug/L		102	71 - 118	0	50

Lab Sample ID: MB 200-89231/3
Matrix: Water
Analysis Batch: 89231

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			06/04/15 09:26	1

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

Lab Sample ID: LCS 200-89231/2
Matrix: Water
Analysis Batch: 89231

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	5230		ug/L		104	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-244336/1-A
Matrix: Water
Analysis Batch: 244624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244336

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/26/15 07:50	05/26/15 19:13	1
Magnesium	ND		0.20	0.043	mg/L		05/26/15 07:50	05/26/15 19:13	1
Manganese	ND		0.0030	0.00040	mg/L		05/26/15 07:50	05/26/15 19:13	1

Lab Sample ID: LCS 480-244336/2-A
Matrix: Water
Analysis Batch: 244624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244336

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.23		mg/L		92	80 - 120
Magnesium	10.0	9.36		mg/L		94	80 - 120
Manganese	0.200	0.192		mg/L		96	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-244495/66
Matrix: Water
Analysis Batch: 244495

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			05/27/15 08:35	1
Sulfate	ND		2.0	0.35	mg/L			05/27/15 08:35	1

Lab Sample ID: MB 480-244495/78
Matrix: Water
Analysis Batch: 244495

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			05/27/15 11:52	1
Sulfate	ND		2.0	0.35	mg/L			05/27/15 11:52	1

Lab Sample ID: LCS 480-244495/65
Matrix: Water
Analysis Batch: 244495

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	20.62		mg/L		103	83 - 121
Sulfate	20.0	19.29		mg/L		96	80 - 129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-244495/77
Matrix: Water
Analysis Batch: 244495

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	20.75		mg/L		104	83 - 121
Sulfate	20.0	19.14		mg/L		96	80 - 129

Lab Sample ID: 480-80899-3 MS
Matrix: Water
Analysis Batch: 244495

Client Sample ID: MW-8-2-052215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	361		500	864.3		mg/L		101	83 - 121
Sulfate	177		500	628.0		mg/L		90	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-244500/123
Matrix: Water
Analysis Batch: 244500

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			05/26/15 12:15	1

Lab Sample ID: MB 480-244500/171
Matrix: Water
Analysis Batch: 244500

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			05/26/15 12:57	1

Lab Sample ID: MB 480-244500/195
Matrix: Water
Analysis Batch: 244500

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			05/26/15 13:18	1

Lab Sample ID: MB 480-244500/3
Matrix: Water
Analysis Batch: 244500

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			05/26/15 10:30	1

Lab Sample ID: MB 480-244500/75
Matrix: Water
Analysis Batch: 244500

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			05/26/15 11:33	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-244500/124
Matrix: Water
Analysis Batch: 244500

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 480-244500/172
Matrix: Water
Analysis Batch: 244500

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 480-244500/196
Matrix: Water
Analysis Batch: 244500

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 480-244500/4
Matrix: Water
Analysis Batch: 244500

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 480-244500/76
Matrix: Water
Analysis Batch: 244500

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 480-244237/3
Matrix: Water
Analysis Batch: 244237

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			05/22/15 21:45	1

Lab Sample ID: LCS 480-244237/4
Matrix: Water
Analysis Batch: 244237

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: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: 480-80899-3 MS
Matrix: Water
Analysis Batch: 244237

Client Sample ID: MW-8-2-052215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	0.052		1.00	0.972		mg/L		92	90 - 110

Lab Sample ID: 480-80899-3 DU
Matrix: Water
Analysis Batch: 244237

Client Sample ID: MW-8-2-052215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite	0.052		0.0502		mg/L		3	20

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

Lab Sample ID: MB 480-245001/28
Matrix: Water
Analysis Batch: 245001

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	0.686	J	1.0	0.43	mg/L			05/27/15 19:35	1

Lab Sample ID: LCS 480-245001/29
Matrix: Water
Analysis Batch: 245001

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	60.77		mg/L		101	90 - 110

Lab Sample ID: 480-80899-3 MS
Matrix: Water
Analysis Batch: 245001

Client Sample ID: MW-8-2-052215
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	B	20.0	22.27		mg/L		101	54 - 131

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-244784/30
Matrix: Water
Analysis Batch: 244784

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.65	J	5.0	0.79	mg/L			05/27/15 14:01	1

Lab Sample ID: LCS 480-244784/31
Matrix: Water
Analysis Batch: 244784

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	95.81		mg/L		96	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-244272/3
Matrix: Water
Analysis Batch: 244272

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			05/23/15 11:00	1

Lab Sample ID: LCS 480-244272/4
Matrix: Water
Analysis Batch: 244272

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	0.763		mg/L		102	90 - 110		

GC/MS VOA

Analysis Batch: 245266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	8260C	
480-80899-2	MW-8-3-052215	Total/NA	Water	8260C	
480-80899-4	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-245266/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245266/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 245306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-3	MW-8-2-052215	Total/NA	Water	8260C	
LCS 480-245306/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245306/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 89231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	RSK-175	
480-80899-2	MW-8-3-052215	Total/NA	Water	RSK-175	
480-80899-3	MW-8-2-052215	Total/NA	Water	RSK-175	
LCS 200-89231/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-89231/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	RSK-175	
480-80899-2	MW-8-3-052215	Total/NA	Water	RSK-175	
480-80899-3	MW-8-2-052215	Total/NA	Water	RSK-175	
LCS 480-244451/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244451/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244451/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 244336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	3005A	
480-80899-2	MW-8-3-052215	Total/NA	Water	3005A	
480-80899-3	MW-8-2-052215	Total/NA	Water	3005A	
LCS 480-244336/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-244336/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 244624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	6010C	244336
480-80899-2	MW-8-3-052215	Total/NA	Water	6010C	244336
480-80899-3	MW-8-2-052215	Total/NA	Water	6010C	244336
LCS 480-244336/2-A	Lab Control Sample	Total/NA	Water	6010C	244336
MB 480-244336/1-A	Method Blank	Total/NA	Water	6010C	244336

General Chemistry

Analysis Batch: 244237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-2	MW-8-3-052215	Total/NA	Water	353.2	
480-80899-3	MW-8-2-052215	Total/NA	Water	353.2	
480-80899-3 DU	MW-8-2-052215	Total/NA	Water	353.2	
480-80899-3 MS	MW-8-2-052215	Total/NA	Water	353.2	
LCS 480-244237/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-244237/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 244242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	353.2	
480-80899-2	MW-8-3-052215	Total/NA	Water	353.2	
480-80899-3	MW-8-2-052215	Total/NA	Water	353.2	

Analysis Batch: 244243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	353.2	

Analysis Batch: 244272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	SM 4500 S2 D	
480-80899-2	MW-8-3-052215	Total/NA	Water	SM 4500 S2 D	
480-80899-3	MW-8-2-052215	Total/NA	Water	SM 4500 S2 D	
LCS 480-244272/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-244272/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 244495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	300.0	
480-80899-2	MW-8-3-052215	Total/NA	Water	300.0	
480-80899-3	MW-8-2-052215	Total/NA	Water	300.0	
480-80899-3 MS	MW-8-2-052215	Total/NA	Water	300.0	
LCS 480-244495/65	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-244495/77	Lab Control Sample	Total/NA	Water	300.0	
MB 480-244495/66	Method Blank	Total/NA	Water	300.0	
MB 480-244495/78	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 244500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	350.1	
480-80899-2	MW-8-3-052215	Total/NA	Water	350.1	
480-80899-3	MW-8-2-052215	Total/NA	Water	350.1	
LCS 480-244500/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244500/172	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244500/196	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244500/4	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-244500/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-244500/123	Method Blank	Total/NA	Water	350.1	
MB 480-244500/171	Method Blank	Total/NA	Water	350.1	
MB 480-244500/195	Method Blank	Total/NA	Water	350.1	
MB 480-244500/3	Method Blank	Total/NA	Water	350.1	
MB 480-244500/75	Method Blank	Total/NA	Water	350.1	

QC Association Summary

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

TestAmerica Job ID: 480-80899-1

Analysis Batch: 244784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	SM 2320B	
480-80899-2	MW-8-3-052215	Total/NA	Water	SM 2320B	
480-80899-3	MW-8-2-052215	Total/NA	Water	SM 2320B	
LCS 480-244784/31	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-244784/30	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 245001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80899-1	MW-8-1-052215	Total/NA	Water	9060A	
480-80899-2	MW-8-3-052215	Total/NA	Water	9060A	
480-80899-3	MW-8-2-052215	Total/NA	Water	9060A	
480-80899-3 MS	MW-8-2-052215	Total/NA	Water	9060A	
LCS 480-245001/29	Lab Control Sample	Total/NA	Water	9060A	
MB 480-245001/28	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-80899-1

Client Sample ID: MW-8-1-052215

Lab Sample ID: 480-80899-1

Date Collected: 05/22/15 10:50

Matrix: Water

Date Received: 05/22/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245266	05/30/15 02:10	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	89231	06/04/15 11:56	NEA	TAL BUR
Total/NA	Analysis	RSK-175		10	244451	05/26/15 11:41	JMO	TAL BUF
Total/NA	Prep	3005A			244336	05/26/15 07:50	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244624	05/26/15 20:11	SLB	TAL BUF
Total/NA	Analysis	300.0		50	244495	05/27/15 12:25	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244500	05/26/15 13:20	STD	TAL BUF
Total/NA	Analysis	353.2		1	244242	05/22/15 21:21	CLT	TAL BUF
Total/NA	Analysis	353.2		1	244243	05/22/15 21:21	CLT	TAL BUF
Total/NA	Analysis	9060A		1	245001	05/28/15 01:03	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	244784	05/27/15 16:02	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		5	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: MW-8-3-052215

Lab Sample ID: 480-80899-2

Date Collected: 05/22/15 11:10

Matrix: Water

Date Received: 05/22/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245266	05/30/15 02:33	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	89231	06/04/15 12:13	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244451	05/26/15 11:59	JMO	TAL BUF
Total/NA	Prep	3005A			244336	05/26/15 07:50	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244624	05/26/15 20:14	SLB	TAL BUF
Total/NA	Analysis	300.0		50	244495	05/27/15 12:33	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244500	05/26/15 12:30	STD	TAL BUF
Total/NA	Analysis	353.2		1	244242	05/22/15 21:49	CLT	TAL BUF
Total/NA	Analysis	353.2		1	244237	05/22/15 21:49	CLT	TAL BUF
Total/NA	Analysis	9060A		1	245001	05/28/15 01:31	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	244784	05/27/15 16:08	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: MW-8-2-052215

Lab Sample ID: 480-80899-3

Date Collected: 05/22/15 15:00

Matrix: Water

Date Received: 05/22/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	245306	05/30/15 13:44	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	89231	06/04/15 12:23	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244451	05/26/15 12:16	JMO	TAL BUF
Total/NA	Prep	3005A			244336	05/26/15 07:50	TAS	TAL BUF
Total/NA	Analysis	6010C		1	244624	05/26/15 20:18	SLB	TAL BUF

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc. TestAmerica Job ID: 480-80899-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	244495	05/27/15 12:41	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244500	05/26/15 12:31	STD	TAL BUF
Total/NA	Analysis	353.2		1	244242	05/22/15 21:50	CLT	TAL BUF
Total/NA	Analysis	353.2		1	244237	05/22/15 21:50	CLT	TAL BUF
Total/NA	Analysis	9060A		1	245001	05/28/15 01:58	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	244784	05/27/15 16:16	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	244272	05/23/15 11:00	NCH	TAL BUF

Client Sample ID: TRIP BLANK **Lab Sample ID: 480-80899-4**
Date Collected: 05/22/15 00:00 **Matrix: Water**
Date Received: 05/22/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245266	05/30/15 00:15	LJF	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: 480-80899-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15 *
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80899-1

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: 480-80899-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80899-1	MW-8-1-052215	Water	05/22/15 10:50	05/22/15 15:40
480-80899-2	MW-8-3-052215	Water	05/22/15 11:10	05/22/15 15:40
480-80899-3	MW-8-2-052215	Water	05/22/15 15:00	05/22/15 15:40
480-80899-4	TRIP BLANK	Water	05/22/15 00:00	05/22/15 15:40

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. Wolf	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone: 716-844-7050	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	S	D	A	A	A	CB	N	N	N		
MW-8-1-052215	5/22/15	1050	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
MW-8-3-052215	5/22/15	1140	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
MW-8-2-052215	5/22/15	1500	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/22/15			Water	N	N				X								
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80899 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: D. Wolf	Date/Time: 5/22/15 15:40	Company	Received by: Cameron Wallace	Date/Time: 5/22/15 15:40	Company TAB	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.0 #1

6/8/2015

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24319.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80899-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 6/4/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8-1-052215 (480-80899-1)	5/22/15	10:50 Eastern		Water			X	3	
MW-8-3-052215 (480-80899-2)	5/22/15	11:10 Eastern		Water			X	3	
MW-8-2-052215 (480-80899-3)	5/22/15	15:00 Eastern		Water			X	3	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/26/15 1700	TA Buff		5/27/15 1015	TABU
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 26MAY15
ACTWGT: 17.7 LB
CAD: 846654/CAFE2807
DIMS: 19x15x10 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

WED - 27 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 5657 0118 4940

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80899-1

Login Number: 80899
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: 480-80899-1

Login Number: 80899
List Number: 2
Creator: Goodrich, Kenneth L

List Source: TestAmerica Burlington
List Creation: 05/27/15 11:44 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455408
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	3.0ºC
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.	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: 480-80975-1

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:
6/8/2015 2:28:21 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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 480-80975-1

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.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance 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.
¤	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: 480-80975-1

Job ID: 480-80975-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80975-1

Receipt
The samples were received on 5/26/2015 3:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: BLDG-10-MW-1-052615 (480-80975-2). 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.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-7-P-1-052615 (480-80975-1), BLDG-10-MW-1-052615 (480-80975-2), (480-80975-G-1 MS) and (480-80975-G-2 MS). The sample was analyzed at a dilution based on screening results.

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-P-1-052615 (480-80975-1). 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: 480-80975-1

Client Sample ID: MW-7-P-1-052615 — Lab Sample ID: 480-80975-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.0		1.0	0.81	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	2.3		1.0	0.90	ug/L	1		8260C	Total/NA
Trichloroethene	0.93	J	1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	7.4		1.0	0.90	ug/L	1		8260C	Total/NA
Ethane	54		7.5	1.5	ug/L	1		RSK-175	Total/NA
Methane	6300		200	50	ug/L	50		RSK-175	Total/NA
Iron	72.9		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	457		0.40	0.087	mg/L	2		6010C	Total/NA
Manganese	9.1		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	4730		100	56.4	mg/L	200		300.0	Total/NA
Ammonia	132		2.0	0.90	mg/L	100		350.1	Total/NA
Total Organic Carbon	6.7	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	213	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	32000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: BLDG-10-MW-1-052615 — Lab Sample ID: 480-80975-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	120000		2000	720	ug/L	2000		8260C	Total/NA
Trichloroethene	2600		2000	920	ug/L	2000		8260C	Total/NA
Methane	13		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	1.2		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	95.6		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.44		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	501		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	215		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.13		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	4.2	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	303	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	17000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80975-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7-P-1-052615 — Lab Sample ID: 480-80975-1

Date Collected: 05/26/15 10:50 — **Matrix: Water**
Date Received: 05/26/15 15:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**2.0**		1.0	0.81	ug/L			05/30/15 14:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 14:52	1
trans-1,2-Dichloroethene	**2.3**		1.0	0.90	ug/L			05/30/15 14:52	1
Trichloroethene	**0.93**	**J**	1.0	0.46	ug/L			05/30/15 14:52	1
Vinyl chloride	**7.4**		1.0	0.90	ug/L			05/30/15 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/30/15 14:52*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/30/15 14:52*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/30/15 14:52*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*05/30/15 14:52*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**54**		7.5	1.5	ug/L			05/27/15 15:13	1
Ethene	ND		7.0	1.5	ug/L			05/27/15 15:13	1
Methane	**6300**		200	50	ug/L			05/28/15 10:41	50

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**32000**		1000	1000	ug/L			06/04/15 14:09	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**72.9**		0.050	0.019	mg/L		05/28/15 08:06	05/28/15 17:53	1
Magnesium	**457**		0.40	0.087	mg/L		05/28/15 08:06	05/29/15 10:10	2
Manganese	**9.1**		0.0030	0.00040	mg/L		05/28/15 08:06	05/28/15 17:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4730**		100	56.4	mg/L			05/28/15 03:04	200
Sulfate	ND		400	69.8	mg/L			05/28/15 03:04	200
Ammonia	**132**		2.0	0.90	mg/L			05/27/15 11:57	100
Nitrate	ND		0.050	0.020	mg/L			05/26/15 20:32	1
Nitrite	ND		0.050	0.020	mg/L			05/26/15 20:32	1
Total Organic Carbon	**6.7**	**B**	1.0	0.43	mg/L			05/27/15 15:22	1
Total Alkalinity	**213**	**B**	5.0	0.79	mg/L			05/27/15 16:28	1
Sulfide	ND		0.10	0.052	mg/L			05/29/15 09:22	1

Client Sample ID: BLDG-10-MW-1-052615 — Lab Sample ID: 480-80975-2

Date Collected: 05/26/15 15:00 — **Matrix: Water**
Date Received: 05/26/15 15:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		2000	1600	ug/L			05/30/15 15:15	2000
Tetrachloroethene	**120000**		2000	720	ug/L			05/30/15 15:15	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			05/30/15 15:15	2000
Trichloroethene	**2600**		2000	920	ug/L			05/30/15 15:15	2000
Vinyl chloride	ND		2000	1800	ug/L			05/30/15 15:15	2000

Client Sample ID: BLDG-10-MW-1-052615 — Lab Sample ID: 480-80975-2

Date Collected: 05/26/15 15:00 — **Matrix: Water**
Date Received: 05/26/15 15:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*05/30/15 15:15*	*2000*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/30/15 15:15*	*2000*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/30/15 15:15*	*2000*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*05/30/15 15:15*	*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			05/27/15 15:30	1
Ethene	ND		7.0	1.5	ug/L			05/27/15 15:30	1
Methane	**13**		4.0	1.0	ug/L			05/27/15 15:30	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**17000**		1000	1000	ug/L			06/04/15 14:22	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.2**		0.050	0.019	mg/L		05/28/15 08:06	05/28/15 17:56	1
Magnesium	**95.6**		0.20	0.043	mg/L		05/28/15 08:06	05/28/15 17:56	1
Manganese	**0.44**		0.0030	0.00040	mg/L		05/28/15 08:06	05/28/15 17:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**501**		10.0	5.6	mg/L			05/28/15 03:53	20
Sulfate	**215**		40.0	7.0	mg/L			05/28/15 03:53	20
Ammonia	**0.13**		0.020	0.0090	mg/L			05/27/15 11:58	1
Nitrate	ND		0.050	0.020	mg/L			05/26/15 20:30	1
Nitrite	ND		0.050	0.020	mg/L			05/26/15 20:30	1
Total Organic Carbon	**4.2**	**B**	1.0	0.43	mg/L			05/27/15 15:50	1
Total Alkalinity	**303**	**B**	5.0	0.79	mg/L			05/27/15 16:59	1
Sulfide	ND	F1	0.10	0.052	mg/L			05/29/15 09:22	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80975-3

Date Collected: 05/26/15 00:00 — **Matrix: Water**
Date Received: 05/26/15 15:45

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			05/29/15 23:53	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 23:53	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 23:53	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 23:53	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/29/15 23:53*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/29/15 23:53*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/29/15 23:53*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/29/15 23:53*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-80975-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80975-1	MW-7-P-1-052615	104	102	99	102
480-80975-2	BLDG-10-MW-1-052615	107	100	98	99
480-80975-3	TRIP BLANK	102	98	97	98
LCS 480-245266/4	Lab Control Sample	99	103	102	100
LCS 480-245306/5	Lab Control Sample	100	104	101	101
MB 480-245266/6	Method Blank	102	98	97	95
MB 480-245306/7	Method Blank	105	102	99	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-245266/6
Matrix: Water
Analysis Batch: 245266

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			05/29/15 22:56	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/29/15 22:56	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/29/15 22:56	1
Trichloroethene	ND		1.0	0.46	ug/L			05/29/15 22:56	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/29/15 22:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/29/15 22:56*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/29/15 22:56*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/29/15 22:56*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/29/15 22:56*	*1*

Lab Sample ID: LCS 480-245266/4
Matrix: Water
Analysis Batch: 245266

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	25.6		ug/L		102	74 - 124
Tetrachloroethene	25.0	26.8		ug/L		107	74 - 122
trans-1,2-Dichloroethene	25.0	26.4		ug/L		105	73 - 127
Trichloroethene	25.0	25.8		ug/L		103	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Lab Sample ID: MB 480-245306/7
Matrix: Water
Analysis Batch: 245306

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			05/30/15 13:06	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/30/15 13:06	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/30/15 13:06	1
Trichloroethene	ND		1.0	0.46	ug/L			05/30/15 13:06	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/30/15 13:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/30/15 13:06*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/30/15 13:06*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/30/15 13:06*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/30/15 13:06*	*1*

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

Lab Sample ID: LCS 480-245306/5
Matrix: Water
Analysis Batch: 245306

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	25.2		ug/L		101	74 - 124
Tetrachloroethene	25.0	25.2		ug/L		101	74 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	24.5		ug/L		98	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-244723/3
Matrix: Water
Analysis Batch: 244723

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			05/27/15 14:20	1
Ethene	ND		7.0	1.5	ug/L			05/27/15 14:20	1
Methane	ND		4.0	1.0	ug/L			05/27/15 14:20	1

Lab Sample ID: LCS 480-244723/4
Matrix: Water
Analysis Batch: 244723

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	14.4		ug/L		99	79 - 120
Ethene	13.6	13.1		ug/L		96	78 - 115
Methane	7.77	8.04		ug/L		103	71 - 118

Lab Sample ID: LCSD 480-244723/5
Matrix: Water
Analysis Batch: 244723

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	14.1		ug/L		97	79 - 120	2	50
Ethene	13.6	12.6		ug/L		93	78 - 115	4	50
Methane	7.77	7.74		ug/L		100	71 - 118	1	50

Lab Sample ID: MB 480-244888/3
Matrix: Water
Analysis Batch: 244888

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			05/28/15 09:49	1
Ethene	ND		7.0	1.5	ug/L			05/28/15 09:49	1
Methane	ND		4.0	1.0	ug/L			05/28/15 09:49	1

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

Lab Sample ID: LCS 480-244888/4
Matrix: Water
Analysis Batch: 244888

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	14.8		ug/L		101	79 - 120
Ethene	13.6	13.4		ug/L		99	78 - 115
Methane	7.77	8.05		ug/L		104	71 - 118

Lab Sample ID: LCSD 480-244888/5
Matrix: Water
Analysis Batch: 244888

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	14.6		ug/L		100	79 - 120	1	50
Ethene	13.6	13.0		ug/L		96	78 - 115	3	50
Methane	7.77	7.85		ug/L		101	71 - 118	3	50

Lab Sample ID: MB 200-89231/3
Matrix: Water
Analysis Batch: 89231

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			06/04/15 09:26	1

Lab Sample ID: LCS 200-89231/2
Matrix: Water
Analysis Batch: 89231

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	5230		ug/L		104	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-244824/1-A
Matrix: Water
Analysis Batch: 245087

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244824

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/28/15 08:06	05/28/15 16:57	1
Magnesium	ND		0.20	0.043	mg/L		05/28/15 08:06	05/28/15 16:57	1
Manganese	ND		0.0030	0.00040	mg/L		05/28/15 08:06	05/28/15 16:57	1

Lab Sample ID: LCS 480-244824/2-A
Matrix: Water
Analysis Batch: 245087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.97		mg/L		100	80 - 120
Magnesium	10.0	9.93		mg/L		99	80 - 120
Manganese	0.200	0.199		mg/L		99	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-244688/52
Matrix: Water
Analysis Batch: 244688

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			05/28/15 00:29	1
Sulfate	ND		2.0	0.35	mg/L			05/28/15 00:29	1

Lab Sample ID: MB 480-244688/76
Matrix: Water
Analysis Batch: 244688

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			05/28/15 03:45	1
Sulfate	ND		2.0	0.35	mg/L			05/28/15 03:45	1

Lab Sample ID: LCS 480-244688/51
Matrix: Water
Analysis Batch: 244688

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	21.10		mg/L		106	83 - 121
Sulfate	20.0	19.26		mg/L		96	80 - 129

Lab Sample ID: LCS 480-244688/75
Matrix: Water
Analysis Batch: 244688

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	21.13		mg/L		106	83 - 121
Sulfate	20.0	19.49		mg/L		97	80 - 129

Lab Sample ID: 480-80975-1 MS
Matrix: Water
Analysis Batch: 244688

Client Sample ID: MW-7-P-1-052615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4730		5000	9942		mg/L		104	83 - 121
Sulfate	ND		5000	4837		mg/L		97	80 - 129

Lab Sample ID: 480-80975-2 MS
Matrix: Water
Analysis Batch: 244688

Client Sample ID: BLDG-10-MW-1-052615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	501		500	1026		mg/L		105	83 - 121
Sulfate	215		500	687.7		mg/L		95	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-244700/27
Matrix: Water
Analysis Batch: 244700

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			05/27/15 11:44	1

Lab Sample ID: LCS 480-244700/28
Matrix: Water
Analysis Batch: 244700

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	0.984		mg/L		98	90 - 110

Lab Sample ID: 480-80975-2 MS
Matrix: Water
Analysis Batch: 244700

Client Sample ID: BLDG-10-MW-1-052615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.13		0.200	0.306		mg/L		90	90 - 110

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

Lab Sample ID: MB 480-244847/3
Matrix: Water
Analysis Batch: 244847

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	0.947	J	1.0	0.43	mg/L			05/27/15 12:14	1

Lab Sample ID: LCS 480-244847/4
Matrix: Water
Analysis Batch: 244847

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	61.91		mg/L		103	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-244784/30
Matrix: Water
Analysis Batch: 244784

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.65	J	5.0	0.79	mg/L			05/27/15 14:01	1

Lab Sample ID: MB 480-244784/54
Matrix: Water
Analysis Batch: 244784

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.40	J	5.0	0.79	mg/L			05/27/15 16:44	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-244784/31
Matrix: Water
Analysis Batch: 244784

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	95.81		mg/L		96	90 - 110

Lab Sample ID: LCS 480-244784/55
Matrix: Water
Analysis Batch: 244784

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	95.59		mg/L		96	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-245118/3
Matrix: Water
Analysis Batch: 245118

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			05/29/15 09:22	1

Lab Sample ID: LCS 480-245118/4
Matrix: Water
Analysis Batch: 245118

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	0.733		mg/L		98	90 - 110

Lab Sample ID: 480-80975-2 MS
Matrix: Water
Analysis Batch: 245118

Client Sample ID: BLDG-10-MW-1-052615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND	F1	0.500	0.388	F1	mg/L		78	90 - 110

Lab Sample ID: 480-80975-2 MSD
Matrix: Water
Analysis Batch: 245118

Client Sample ID: BLDG-10-MW-1-052615
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	F1	0.500	0.389	F1	mg/L		78	90 - 110	0	20

GC/MS VOA

Analysis Batch: 245266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-245266/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245266/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 245306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	8260C	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	8260C	
LCS 480-245306/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-245306/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 89231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	RSK-175	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	RSK-175	
LCS 200-89231/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-89231/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	RSK-175	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	RSK-175	
LCS 480-244723/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244723/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244723/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 244888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	RSK-175	
LCS 480-244888/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-244888/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-244888/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 244824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	3005A	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	3005A	
LCS 480-244824/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-244824/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 245087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	6010C	244824
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	6010C	244824
LCS 480-244824/2-A	Lab Control Sample	Total/NA	Water	6010C	244824
MB 480-244824/1-A	Method Blank	Total/NA	Water	6010C	244824

Metals (Continued)

Analysis Batch: 245196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	6010C	244824

General Chemistry

Analysis Batch: 244580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	353.2	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	353.2	

Analysis Batch: 244582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	353.2	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	353.2	

Analysis Batch: 244688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	300.0	
480-80975-1 MS	MW-7-P-1-052615	Total/NA	Water	300.0	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	300.0	
480-80975-2 MS	BLDG-10-MW-1-052615	Total/NA	Water	300.0	
LCS 480-244688/51	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-244688/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-244688/52	Method Blank	Total/NA	Water	300.0	
MB 480-244688/76	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 244700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	350.1	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	350.1	
480-80975-2 MS	BLDG-10-MW-1-052615	Total/NA	Water	350.1	
LCS 480-244700/28	Lab Control Sample	Total/NA	Water	350.1	
MB 480-244700/27	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 244784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	SM 2320B	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	SM 2320B	
LCS 480-244784/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-244784/55	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-244784/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-244784/54	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 244847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	9060A	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	9060A	
LCS 480-244847/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-244847/3	Method Blank	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 245118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80975-1	MW-7-P-1-052615	Total/NA	Water	SM 4500 S2 D	
480-80975-2	BLDG-10-MW-1-052615	Total/NA	Water	SM 4500 S2 D	
480-80975-2 MS	BLDG-10-MW-1-052615	Total/NA	Water	SM 4500 S2 D	
480-80975-2 MSD	BLDG-10-MW-1-052615	Total/NA	Water	SM 4500 S2 D	
LCS 480-245118/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-245118/3	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: 480-80975-1

Client Sample ID: MW-7-P-1-052615

Lab Sample ID: 480-80975-1

Date Collected: 05/26/15 10:50

Matrix: Water

Date Received: 05/26/15 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245306	05/30/15 14:52	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	89231	06/04/15 14:09	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244723	05/27/15 15:13	MRB	TAL BUF
Total/NA	Analysis	RSK-175		50	244888	05/28/15 10:41	MRB	TAL BUF
Total/NA	Prep	3005A			244824	05/28/15 08:06	TAS	TAL BUF
Total/NA	Analysis	6010C		1	245087	05/28/15 17:53	SLB	TAL BUF
Total/NA	Prep	3005A			244824	05/28/15 08:06	TAS	TAL BUF
Total/NA	Analysis	6010C		2	245196	05/29/15 10:10	SLB	TAL BUF
Total/NA	Analysis	300.0		200	244688	05/28/15 03:04	CAS	TAL BUF
Total/NA	Analysis	350.1		100	244700	05/27/15 11:57	STD	TAL BUF
Total/NA	Analysis	353.2		1	244580	05/26/15 20:32	CLT	TAL BUF
Total/NA	Analysis	353.2		1	244582	05/26/15 20:32	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244847	05/27/15 15:22	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	244784	05/27/15 16:28	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	245118	05/29/15 09:22	NCH	TAL BUF

Client Sample ID: BLDG-10-MW-1-052615

Lab Sample ID: 480-80975-2

Date Collected: 05/26/15 15:00

Matrix: Water

Date Received: 05/26/15 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2000	245306	05/30/15 15:15	LJF	TAL BUF
Total/NA	Analysis	RSK-175		1	89231	06/04/15 14:22	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	244723	05/27/15 15:30	MRB	TAL BUF
Total/NA	Prep	3005A			244824	05/28/15 08:06	TAS	TAL BUF
Total/NA	Analysis	6010C		1	245087	05/28/15 17:56	SLB	TAL BUF
Total/NA	Analysis	300.0		20	244688	05/28/15 03:53	CAS	TAL BUF
Total/NA	Analysis	350.1		1	244700	05/27/15 11:58	STD	TAL BUF
Total/NA	Analysis	353.2		1	244580	05/26/15 20:30	CLT	TAL BUF
Total/NA	Analysis	353.2		1	244582	05/26/15 20:30	CLT	TAL BUF
Total/NA	Analysis	9060A		1	244847	05/27/15 15:50	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	244784	05/27/15 16:59	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	245118	05/29/15 09:22	NCH	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-80975-3

Date Collected: 05/26/15 00:00

Matrix: Water

Date Received: 05/26/15 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	245266	05/29/15 23:53	LJF	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-80975-1

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: 480-80975-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

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	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15 *
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-80975-1

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: 480-80975-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80975-1	MW-7-P-1-052615	Water	05/26/15 10:50	05/26/15 15:45
480-80975-2	BLDG-10-MW-1-052615	Water	05/26/15 15:00	05/26/15 15:45
480-80975-3	TRIP BLANK	Water	05/26/15 00:00	05/26/15 15:45

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: D. Wulf	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone: 716-844-7050	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

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; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	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 Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N		
MW-7-P-1-052615	5/26/15	1050	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
BLDG-10-MW-1-052615	5/26/15	1500	G	Water	N	N	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK	5/26/15			Water	N	N				X								
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														
				Water														

480-80975 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Relinquished by:	5/26/15 1545		Received by:	5/26/15 1545	TA BUFF
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: #1 2.5

6/8/2015

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 (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24330.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80975-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 6/5/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7-P-1-052615 (480-80975-1)	5/26/15	10:50 Eastern		Water			X	3	
BLDG-10-MW-1-052615 (480-80975-2)	5/26/15	15:00 Eastern		Water			X	3	

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cameron Wallace	5-27-15 1200	TAB		5/28/15 10:25	TA-BTV
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

6/8/2015


ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE
AMHERST, NY 14228
UNITED STATES US
SHIP DATE: 27MAY15
ACTWGT: 9.6 LB
CAD: 846654/CAFE2807
DIMS: 15x13x10 IN
BILL RECIPIENT
TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: BURLINGTON
DEPT: SAMPLE CONTROL
FZ 0
RT 0
5101
05.28
THU - 28 MAY AA
STANDARD OVERNIGHT
TRK# 0201 5657 0118 5101
EK BTVA
05403
VT-US
BTV
Part #:156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80975-1

Login Number: 80975
List Number: 1
Creator: Robison, Zachary J

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.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80975-1

Login Number: 80975
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/28/15 12:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455441
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	3.8ºC
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.	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: 480-82984-1
Client Project/Site: 058507, GM-Lockport Groundwater Sampling

For:
GHD Services Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Authorized for release by:
7/9/2015 7:36:41 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

Table of Contents

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance 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: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Job ID: 480-82984-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-82984-1

Receipt
The samples were received on 6/26/2015 3:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.7° C.

GC/MS VOA
Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-6-062615 (480-82984-3), (480-82984-A-3 MS) and (480-82984-A-3 MSD). 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.

Detection Summary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Client Sample ID: MW-10-3-062615 — Lab Sample ID: 480-82984-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.0		1.0	0.81	ug/L	1		8260C	Total/NA
Tetrachloroethene	4.2		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	4.4		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: MW-7-P-1-062615 — Lab Sample ID: 480-82984-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	2.2		1.0	0.90	ug/L	1		8260C	Total/NA
Vinyl chloride	1.1		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: MW-7-6-062615 — Lab Sample ID: 480-82984-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	600	F1	10	8.1	ug/L	10		8260C	Total/NA
Tetrachloroethene	720	F1	10	3.6	ug/L	10		8260C	Total/NA
Trichloroethene	350		10	4.6	ug/L	10		8260C	Total/NA
Vinyl chloride	62		10	9.0	ug/L	10		8260C	Total/NA

Client Sample ID: MW-8-4-062615 — Lab Sample ID: 480-82984-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	87		1.0	0.81	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	1.1		1.0	0.90	ug/L	1		8260C	Total/NA
Trichloroethene	12		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	66		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: MW-7-3-062615 — Lab Sample ID: 480-82984-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.2		1.0	0.81	ug/L	1		8260C	Total/NA
Vinyl chloride	30		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: DUPE-1-062615 — Lab Sample ID: 480-82984-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.2		1.0	0.81	ug/L	1		8260C	Total/NA
Tetrachloroethene	5.1		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	5.0		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-82984-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-10-3-062615

Lab Sample ID: 480-82984-1
Matrix: Water
Date Collected: 06/26/15 09:00
Date Received: 06/26/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**5.0**		1.0	0.81	ug/L			07/02/15 13:49	1
Tetrachloroethene	**4.2**		1.0	0.36	ug/L			07/02/15 13:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/02/15 13:49	1
Trichloroethene	**4.4**		1.0	0.46	ug/L			07/02/15 13:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/02/15 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*07/02/15 13:49*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*07/02/15 13:49*	*1*
Toluene-d8 (Surr)	*106*		*71 - 126*		*07/02/15 13:49*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*07/02/15 13:49*	*1*

Client Sample ID: MW-7-P-1-062615

Lab Sample ID: 480-82984-2
Matrix: Water
Date Collected: 06/26/15 09:20
Date Received: 06/26/15 15:40

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			07/02/15 14:16	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/02/15 14:16	1
trans-1,2-Dichloroethene	**2.2**		1.0	0.90	ug/L			07/02/15 14:16	1
Trichloroethene	ND		1.0	0.46	ug/L			07/02/15 14:16	1
Vinyl chloride	**1.1**		1.0	0.90	ug/L			07/02/15 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*66 - 137*		*07/02/15 14:16*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*07/02/15 14:16*	*1*
Toluene-d8 (Surr)	*106*		*71 - 126*		*07/02/15 14:16*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*07/02/15 14:16*	*1*

Client Sample ID: MW-7-6-062615

Lab Sample ID: 480-82984-3
Matrix: Water
Date Collected: 06/26/15 09:40
Date Received: 06/26/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**600**	**F1**	10	8.1	ug/L			07/02/15 14:44	10
Tetrachloroethene	**720**	**F1**	10	3.6	ug/L			07/02/15 14:44	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			07/02/15 14:44	10
Trichloroethene	**350**		10	4.6	ug/L			07/02/15 14:44	10
Vinyl chloride	**62**		10	9.0	ug/L			07/02/15 14:44	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*07/02/15 14:44*	*10*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*07/02/15 14:44*	*10*
Toluene-d8 (Surr)	*106*		*71 - 126*		*07/02/15 14:44*	*10*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*07/02/15 14:44*	*10*

Client Sample ID: MW-8-4-062615

Lab Sample ID: 480-82984-4
Matrix: Water
Date Collected: 06/26/15 10:05
Date Received: 06/26/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**87**		1.0	0.81	ug/L			07/07/15 05:16	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/07/15 05:16	1
trans-1,2-Dichloroethene	**1.1**		1.0	0.90	ug/L			07/07/15 05:16	1
Trichloroethene	**12**		1.0	0.46	ug/L			07/07/15 05:16	1
Vinyl chloride	**66**		1.0	0.90	ug/L			07/07/15 05:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*127*		*66 - 137*		*07/07/15 05:16*	*1*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*07/07/15 05:16*	*1*
Toluene-d8 (Surr)	*104*		*71 - 126*		*07/07/15 05:16*	*1*
Dibromofluoromethane (Surr)	*112*		*60 - 140*		*07/07/15 05:16*	*1*

Client Sample ID: MW-7-3-062615

Lab Sample ID: 480-82984-5
Matrix: Water
Date Collected: 06/26/15 10:20
Date Received: 06/26/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3.2**		1.0	0.81	ug/L			07/07/15 05:43	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/07/15 05:43	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/07/15 05:43	1
Trichloroethene	ND		1.0	0.46	ug/L			07/07/15 05:43	1
Vinyl chloride	**30**		1.0	0.90	ug/L			07/07/15 05:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*66 - 137*		*07/07/15 05:43*	*1*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*07/07/15 05:43*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*07/07/15 05:43*	*1*
Dibromofluoromethane (Surr)	*109*		*60 - 140*		*07/07/15 05:43*	*1*

Client Sample ID: DUPE-1-062615

Lab Sample ID: 480-82984-6
Matrix: Water
Date Collected: 06/26/15 00:00
Date Received: 06/26/15 15:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**5.2**		1.0	0.81	ug/L			07/07/15 06:11	1
Tetrachloroethene	**5.1**		1.0	0.36	ug/L			07/07/15 06:11	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/07/15 06:11	1
Trichloroethene	**5.0**		1.0	0.46	ug/L			07/07/15 06:11	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/07/15 06:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*66 - 137*		*07/07/15 06:11*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*07/07/15 06:11*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*07/07/15 06:11*	*1*
Dibromofluoromethane (Surr)	*107*		*60 - 140*		*07/07/15 06:11*	*1*

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Client Sample ID: TRIP BLANK
Date Collected: 06/26/15 00:00
Date Received: 06/26/15 15:40

Lab Sample ID: 480-82984-7
Matrix: Water

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			07/02/15 16:33	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/02/15 16:33	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/02/15 16:33	1
Trichloroethene	ND		1.0	0.46	ug/L			07/02/15 16:33	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/02/15 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*66 - 137*		*07/02/15 16:33*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*07/02/15 16:33*	*1*
Toluene-d8 (Surr)	*107*		*71 - 126*		*07/02/15 16:33*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*07/02/15 16:33*	*1*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-82984-1	MW-10-3-062615	107	105	106	94
480-82984-2	MW-7-P-1-062615	109	106	106	94
480-82984-3	MW-7-6-062615	107	106	106	96
480-82984-3 MS	MW-7-6-062615	116	112	102	105
480-82984-3 MSD	MW-7-6-062615	113	110	104	101
480-82984-4	MW-8-4-062615	127	107	104	112
480-82984-5	MW-7-3-062615	120	107	103	109
480-82984-6	DUPE-1-062615	120	105	103	107
480-82984-7	TRIP BLANK	116	109	107	104
LCS 480-251419/4	Lab Control Sample	112	112	105	101
LCS 480-251807/6	Lab Control Sample	112	113	103	102
MB 480-251419/6	Method Blank	114	107	106	102
MB 480-251807/8	Method Blank	114	109	105	102

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 480-251419/6
Matrix: Water
Analysis Batch: 251419

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			07/02/15 12:23	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/02/15 12:23	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/02/15 12:23	1
Trichloroethene	ND		1.0	0.46	ug/L			07/02/15 12:23	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/02/15 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*66 - 137*		*07/02/15 12:23*	*1*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*07/02/15 12:23*	*1*
Toluene-d8 (Surr)	*106*		*71 - 126*		*07/02/15 12:23*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*07/02/15 12:23*	*1*

Lab Sample ID: LCS 480-251419/4
Matrix: Water
Analysis Batch: 251419

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	22.2		ug/L		89	74 - 124
Tetrachloroethene	25.0	22.7		ug/L		91	74 - 122
trans-1,2-Dichloroethene	25.0	22.5		ug/L		90	73 - 127
Trichloroethene	25.0	23.8		ug/L		95	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*66 - 137*
4-Bromofluorobenzene (Surr)	*112*		*73 - 120*
Toluene-d8 (Surr)	*105*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Lab Sample ID: 480-82984-3 MS
Matrix: Water
Analysis Batch: 251419

Client Sample ID: MW-7-6-062615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	600	F1	250	770	F1	ug/L		68	74 - 124
Tetrachloroethene	720	F1	250	817	F1	ug/L		38	74 - 122
trans-1,2-Dichloroethene	ND		250	242		ug/L		97	73 - 127
Trichloroethene	350		250	578		ug/L		92	74 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*116*		*66 - 137*
4-Bromofluorobenzene (Surr)	*112*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*
Dibromofluoromethane (Surr)	*105*		*60 - 140*

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

Lab Sample ID: 480-82984-3 MSD
Matrix: Water
Analysis Batch: 251419

Client Sample ID: MW-7-6-062615
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	600	F1	250	731	F1	ug/L		53	74 - 124	5	15
Tetrachloroethene	720	F1	250	777	F1	ug/L		22	74 - 122	5	20
trans-1,2-Dichloroethene	ND		250	227		ug/L		91	73 - 127	7	20
Trichloroethene	350		250	533		ug/L		74	74 - 123	8	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*113*		*66 - 137*
4-Bromofluorobenzene (Surr)	*110*		*73 - 120*
Toluene-d8 (Surr)	*104*		*71 - 126*
Dibromofluoromethane (Surr)	*101*		*60 - 140*

Lab Sample ID: MB 480-251807/8
Matrix: Water
Analysis Batch: 251807

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			07/06/15 22:04	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/06/15 22:04	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/06/15 22:04	1
Trichloroethene	ND		1.0	0.46	ug/L			07/06/15 22:04	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/06/15 22:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*66 - 137*		*07/06/15 22:04*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*07/06/15 22:04*	*1*
Toluene-d8 (Surr)	*105*		*71 - 126*		*07/06/15 22:04*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*07/06/15 22:04*	*1*

Lab Sample ID: LCS 480-251807/6
Matrix: Water
Analysis Batch: 251807

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	23.4		ug/L		94	74 - 124
Tetrachloroethene	25.0	23.1		ug/L		92	74 - 122
trans-1,2-Dichloroethene	25.0	23.2		ug/L		93	73 - 127
Trichloroethene	25.0	25.3		ug/L		101	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*66 - 137*
4-Bromofluorobenzene (Surr)	*113*		*73 - 120*
Toluene-d8 (Surr)	*103*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

GC/MS VOA

Analysis Batch: 251419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82984-1	MW-10-3-062615	Total/NA	Water	8260C	
480-82984-2	MW-7-P-1-062615	Total/NA	Water	8260C	
480-82984-3	MW-7-6-062615	Total/NA	Water	8260C	
480-82984-3 MS	MW-7-6-062615	Total/NA	Water	8260C	
480-82984-3 MSD	MW-7-6-062615	Total/NA	Water	8260C	
480-82984-7	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-251419/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-251419/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 251807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82984-4	MW-8-4-062615	Total/NA	Water	8260C	
480-82984-5	MW-7-3-062615	Total/NA	Water	8260C	
480-82984-6	DUPE-1-062615	Total/NA	Water	8260C	
LCS 480-251807/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-251807/8	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Client Sample ID: MW-10-3-062615
Lab Sample ID: 480-82984-1
Date Collected: 06/26/15 09:00
Matrix: Water
Date Received: 06/26/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	251419	07/02/15 13:49	EDB	TAL BUF

Client Sample ID: MW-7-P-1-062615
Lab Sample ID: 480-82984-2
Date Collected: 06/26/15 09:20
Matrix: Water
Date Received: 06/26/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	251419	07/02/15 14:16	EDB	TAL BUF

Client Sample ID: MW-7-6-062615
Lab Sample ID: 480-82984-3
Date Collected: 06/26/15 09:40
Matrix: Water
Date Received: 06/26/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	251419	07/02/15 14:44	EDB	TAL BUF

Client Sample ID: MW-8-4-062615
Lab Sample ID: 480-82984-4
Date Collected: 06/26/15 10:05
Matrix: Water
Date Received: 06/26/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	251807	07/07/15 05:16	EDB	TAL BUF

Client Sample ID: MW-7-3-062615
Lab Sample ID: 480-82984-5
Date Collected: 06/26/15 10:20
Matrix: Water
Date Received: 06/26/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	251807	07/07/15 05:43	EDB	TAL BUF

Client Sample ID: DUPE-1-062615
Lab Sample ID: 480-82984-6
Date Collected: 06/26/15 00:00
Matrix: Water
Date Received: 06/26/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	251807	07/07/15 06:11	EDB	TAL BUF

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Client Sample ID: TRIP BLANK

Date Collected: 06/26/15 00:00
Date Received: 06/26/15 15:40

Lab Sample ID: 480-82984-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	251419	07/02/15 16:33	EDB	TAL BUF

Laboratory References:

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

Certification Summary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

Method Summary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF

Protocol References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-82984-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-82984-1	MW-10-3-062615	Water	06/26/15 09:00	06/26/15 15:40
480-82984-2	MW-7-P-1-062615	Water	06/26/15 09:20	06/26/15 15:40
480-82984-3	MW-7-6-062615	Water	06/26/15 09:40	06/26/15 15:40
480-82984-4	MW-8-4-062615	Water	06/26/15 10:05	06/26/15 15:40
480-82984-5	MW-7-3-062615	Water	06/26/15 10:20	06/26/15 15:40
480-82984-6	DUPE-1-062615	Water	06/26/15 00:00	06/26/15 15:40
480-82984-7	TRIP BLANK	Water	06/26/15 00:00	06/26/15 15:40

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
GZA	THOMAS BOHLEN	06/26/15	284769
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
535 WASHINGTON ST. 11TH FLOOR	716-849-7050		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
BUFFALO / NY / 14043	DAN WELF		
Project Name and Location (State)	**Carrier/Waybill Number**		
GM-LOCKPORT GROUNDWATER SAMPLING-058507			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC's 8260B	PCB, TCE, DCE (TRANS & CIS) AND VC	Special Instructions/ Conditions of Receipt
MW-10-3-062615	6/26/15	0900		X						X			X		
MW-7-P-1-062615	6/26/15	0920		X						X			X		
MW-7-6-062615	6/26/15	0940		X						X			X		
MW-8-4-062615	6/26/15	1005		X						X			X		
MW-7-3-062615	6/26/15	1020		X						X			X		
DUPE-1-062615	6/26/15	—		X						X			X		
TRIP BLANK	6/26/15	—		X						X			X		

480-82984 Chain of Custody

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

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	6/26/15	15:40	[signature]	6/26/15	1540
2.						
3.						

Comments

Temp 4.7 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

7/9/2015

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-82984-1

Login Number: 82984
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	